

Knowledge Management Practices in Local Government: The Case of the City of Johannesburg

by
Thabile Mange

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Supervisor: Christiaan Maasdorp
Department of Information Science,
University of Stellenbosch

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DECLARATION

By submitting this thesis electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the owner of the copyright thereof (unless to the extent explicitly otherwise stated) and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

Date: April 2019

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I want to thank God for the opportunity He's granted me to do the masters programme and complete it. Glory be to God!

It was not easy juggling work, research, social and family life. But with the assistance of my family, I have managed to cope with all of the above. I wish to thank my wife, Keabetswe, daughters, Karabo and Musa, and son, Siyabonga for their unwavering assistance.

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DEDICATION

This work is a dedication to, Elias and Ncanyiwe, my late brother, Mandla, and my late young sister, Nontsikelelo. If they were here, they would be proud of my achievement. Nevertheless, I am sure they are proud still wherever they are. I dedicate this thesis to them.

SUMMARY

The thesis investigates knowledge management (KM) practices in the South African local government on the assumption that good knowledge management leads to increased effectiveness and service delivery. The thesis implemented a mixed method research design which assessed the KM practices utilising questionnaires targeting senior managers as well as a follow-up interview with the director of KM at the organization.

The purpose of the thesis was to determine the nature and extent of knowledge management practices at a South African metropolitan council, namely the City of Johannesburg. To that end a validated questionnaire, the Knowledge Management Assessment Tool, was used to survey senior managers in the City of Johannesburg. The preliminary results of the survey were then used in a follow-up in-depth interview was conducted with the director responsible for knowledge management at the City of Johannesburg. The end result was a profile of knowledge management practices in terms of leadership, culture, processes, structure, information technology infrastructure, and knowledge management measures.

The findings are that knowledge management practices are embedded in the roles and structure of the City of Johannesburg. There is a department dedicated to manage and facilitate knowledge in the metropolitan council. However, it was also found that there were impediments to the implementation of knowledge management. In particular leadership support for knowledge management seems to be poor, and the level of practices is low across all the dimensions measured. It is recommended that the municipality should develop a monitoring and evaluation system to track the effectiveness of its knowledge management interventions.

OPSOMMING

Die tesis ondersoek kennisbestuurspraktyke in die Suid Afrikaanse plaaslike regering met die aanname dat goeie kennisbestuur verbeterde dienslewering tot gevolg sal hê. Die tesis maak gebruik van 'n gemengde metode navorsingsontwerp waarmee kennisbestuurspraktyke gemeet word met 'n vraelys onder senior bestuurslede en dan geïnterpreteer word aan die hand van 'n in-diepte onderhoud met die direkteur van kennisbestuur by die organisasie.

Die doel van die tesis is om die aard en omvang van kennisbestuurspraktyke by 'n Suid Afrikaanse metropolitaanse raad, naamlik die Stad van Johannesburg, vas te stel. Met daardie doel voor oë is 'n gevalideerde vraelys, die "Knowledge Management Assessment Tool", gebruik om senior bestuurslede van die Stad van Johannesburg te ondervra. Daarna is die voorlopige resultate van die vraelys gebruik as die basis vir 'n in-diepte opvolg onderhoud met die direkteur van kennisbestuur by die Stad van Johannesburg. Die resultaat was 'n profile van kennisbestuurspraktyke by die organisasie in terme van leierskap, kultuur, proses, struktuur, informasie tegnologie infrastruktuur, en kennisbestuursmeting.

Daar is bevind dat kennisbestuurspraktyke wel in die organisatoriese rolle en struktuur van die Stad van Johannesburg ingebed is. Daar is byvoorbeeld 'n departement toegespits op die bestuur en fasilitering van kennis in die metropolitaanse raad. Daar is egter ook bevind dat daar baie struikelblokke in die weg van kennisbestuursimplementasie is. In besonder blyk leierskapsondersteuning vir kennisbestuur gebrekkig te wees, en die vlak van kennisbestuurspraktyke was deurgaans laag oor alle dimensies gemeet. Daar word aanbeveel dat die munisipaliteit 'n moniterings- en evaluerings sisteem ontwikkel om die effektiwiteit van kennisbestuursprogramme te monitor.

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ABBREVIATIONS

CKO – Chief Knowledge Officer

COJ – City of Johannesburg

COGTA – Cooperative Governance and Traditional Affairs

COP - Communities of Practice

DBSA - Development Bank of South Africa

DID - Department for International Development

DPSA - Department of Public Service and Administration

GITOC - Government and Information Technology Officers Council

GDS – Growth and Development Strategy

GIS - Geographic Information System

ICT – Information Communication Technology

IDP - Integrated Development Plan

IPSP - Integrated Provincial Assistance Programme

JIKE – Johannesburg Creativity Knowledge Enterprise

KMRG - Knowledge Management Reference Group

LKMP - Learning and Knowledge Management Programme

MMC – Member of the Mayoral Committee

MOE – Municipal Owned Entity

NCOP - National Council of Provinces

NPM - New Public Management

OECD - Organisation for Economic Co-operation and Development

RWC – Research Working Committee

RLKM - Research, Learning and Knowledge Management

SA – South Africa

SALGA – South African Local government Association

SACN - South African Cities Networks

SAMDI - South African Management Development Institute

SITA - State Information Technology Agency

CHAPTER 1: INTRODUCTION

1.1 Introduction

The view that knowledge management improves competitiveness and productivity has been around for some time. As a result, many firms (particularly the private sector) have adopted knowledge management as a management technique to improve their edge over their competition, however the local government sector is a late bloomer in adopting knowledge management. The focus of this thesis is on the level and extent of knowledge management practices at the local government level in South Africa.

It is the constitutional duty of the municipality/local government in South Africa to deliver standard services for example sanitation and water to the local communities. The local government should provide quality service delivery to all citizens. However, the local government is struggling to fulfil its constitutional mandate – for instance, offering quality, efficient as well as effective services to the local citizens. This has resulted in the heightened service delivery protests in several parts of the country, with citizens demanding better services.

The lack of knowledge management practices has been pointed out as a contributory factor in the local municipalities' failure to deliver the much needed services to the local communities. Mavodza (2010) said the local government may be challenged by the lack of knowledge management practices. Therefore a desperate need for the local government to adopt and implement knowledge management in order to improve service delivery to the local communities has risen.

The demand for effective and efficient service delivery requires a different approach and attitude from the local government. The implementation and use of knowledge management practices is assumed to be an important process that can help improve service delivery. For this reason, local government adopted knowledge management as a management concept toward better service delivery. However, the level of implementation has been variable.

The implementation of knowledge management practise will assist local governments to better deliver services and function effectively and optimally (Municipal Institute of Learning,

2010). Gaffoor (2008:37) added, knowledge management could however advance local government overall performance by productivity improvement, and improved productivity and effectiveness. “Knowledge management contributes to cost efficiency and improved service delivery” (Cong and Pandya 2003: 29).

The purpose of the thesis is to probe the knowledge management practices at local government level in South Africa. This thesis will assess the knowledge management practices at local government level through a survey of senior managers and a follow-up interview based on those results with the director of knowledge management in the same organisation. Therefore, the overall aim of the thesis will be to establish whether and to what extent knowledge management principles and practices are embedded at local government level by using the City of Johannesburg (COJ) metropolitan council as a case study.

1.2 Local Government in South Africa

Nel (2001:25) asserts that local government is part of the public sector in contact with the citizens and cannot be replaced in its service delivery role. Ngubane (2005) added that local government being the face of service delivery have to confront and solve the challenges associated with service.

Local government’s mandate is to provide basic services (clean water, sanitation, refuse collection) directly to communities. Local municipalities are governed by The Municipal Systems Act (No. 32 of 2000), which subject them to service delivery conditions, the Batho Pele Principles and the Integrated Development Plan (IDP).

The shift to democracy in South Africa caused a change in local government to cater for the demands and developments of the wider citizenry more equally. Post-apartheid, some of the local government concerns to be dealt with included underdevelopment, local level participatory governance and establishing local government to provide improved service delivery sustainably. (Paradza, Mokwena and Richards, 2010:6).

The inception at municipal level has been assisted by appropriately crafted laws to respond to improve service delivery. The legislation includes The 1998 White Paper on municipalities, which encourages progressive local government which viewed participatory planning as important

The White Paper called on councillors to engage the institutions of civil society to foster community planning and consensus around development and find local solutions to problems. In 2001, municipal boundaries were redrawn in a delimitation initiative that resulted in the reduction of the total number of municipalities from nearly 1000 to 284 municipalities” (Paradza, Mokwena and Richards, 2010:6).

The Constitution provides for three categories of municipalities. As indicated in the Constitution, the Local government: Municipal Structures Act, 1998 (Act 117 of 1998) contains criteria for determining when an area has a Category A municipality (metropolitan municipalities) and when municipalities fall into categories B (local municipalities) or C (district municipalities).

This is how the 283 municipalities are categorised:

- A: Metros (6): Large urban complexes with populations over 1 million and accounting for 56% of all municipal expenditure in the country.
- B1: Local Municipalities with large budgets and containing secondary cities (31)
- B2: Local Municipalities with a large town as a core (137)
- B3: Local Municipalities with small towns, with relatively small population and significant proportion of urban population but with no large town as a core (31).
- B4: Local Municipalities which are mainly rural with communal tenure and with, at most, one or two small towns in their area (32)
- C1: District Municipalities which are not water service authorities (25)
- C2: District Municipalities which are water service authorities (21)

The fact that metropolitan municipalities are financially stable ensures that they have access to lines of credit and can retain better-qualified and skilled personnel (National Planning Commission, 2012). Also in metropolitan areas there is flexibility in the executive system used, some systems in use include the mayoral or collective executive committee systems

South Africa has eight Metropolitan municipalities in the following locations, Durban, East London, Cape Town, East Rand, Johannesburg, Bloemfontein, Port Elizabeth and Pretoria. The metropolitan councils have similarities in budget and operational procedure on property and rates

District councils and local councils constitute the municipalities which are not metropolitan. The Local Government: Municipal Structures Act, 1998, has a provision for committees whose duties include:

- Preparation, implementation and reviewing of development programmes industrial in nature (IDPs)
- Establish, implement and review municipality performance-based management systems
- Monitoring and reviewing municipalities overall performances
- Preparation of municipal budgets
- Participation in decision-making concerning municipality services provision
- Communicate government business (South African Government, www.gov.za)

1.2.1 Local Government as a Sphere of Government

The Constitution provides for three spheres of government comprising national, provincial and local, which are distinctive, interdependent and interrelated. Local government is officially recognised as one of the three spheres of government. It is no longer a subordinate to provincial or national government but a sphere with its own powers and functions, which is legally demarcated into geographical areas of jurisdiction.

1.2.2 Legislative Foundation of the Local Government

There is much legislation that constitute the foundation of the local government. However, the focus of this investigation will be on the following legislation: a) the Constitution of the Republic of South Africa Act, 1996 (Act 108 of 1996), b) the Local government Municipal Structures Act, 1998 (Act 117 of 1998) and c) the Local government Municipal Systems Act,

2000 (Act 32 of 2000). These mentioned laws have a bearing day to day performance of local government.

The Local government Municipal Structures Act, 1998 (Act 117 of 1998) has the following objectives:

- a) To establish municipalities according to recommended categorisation;
- b) To determine criteria for municipal categorisation;
- c) To stipulate power and functions between different municipal categories
- d) To monitor and align the internal systems and municipal office bearer functions;
- e) To establish a legitimate system of elections;
- f) To caters for all other matters concerning municipal duties and structure

The Municipal Systems Act No. 32 of 2000 is a provision of the legal framework that governs the operations of local government and specifies the deliverables of members of the local community in the decision-making processes of a municipality. The major drive for the Act is to provide the best service.

The objectives of this Act are:

- a) To establish systems assists with socio-economic aspects in the community
- b) To establish the legal aspects for municipal operations.
- c) To foster community-based involvement;
- d) To establish standard operating procedures
- e) To have an inclusive system which caters for the poor
- f) To provide for credit control and debt collection
- g) To provide for legal matters pertaining to local government;

h) In addition, to attend to other matters arising.

Local government has autonomy though its authority and deliverables are specified in the South African Constitution (Chapter 7, part 152):

- Provision of a democratically elected and transparent government for local communities;
- Provision of sustainable service delivery
- Promote socio-economic development
- Ensure a safe environment

Part 153 details municipal developmental duties:

- Construct its operations to prioritise service delivery as well as improve the socio-economic progress of the community.
- Involvement in national and provincial developmental programmes.

Service delivery by municipalities is determined by (1) budget (2) inter-governmental relations; (3) The Expanded Public Works Programme; (4) policy and procedure; (5) the Integrated Development Plan and the Performance Management System; and (6) Batho Pele (Pretorius and Schurink, 2007)

1.2.3 The South African Local government Association

The constitutionally recognised local government representative is the South African Local Government Association (SALGA), often referred to as "Organised Local Government".

SALGA deliverables are:

- Audit and advise local government to be developmental in communities
- Public relations for local governments
- Encourage and establish full and equal participation of both male and female

- Take on role of the national employer's business for municipal and provincial member employers.

278 municipality leaderships elect the SALGA leadership hence it is the local government head.

1.2.4 Background: City of Johannesburg

The City of Johannesburg, a metropolitan municipal council, was selected as case study. It was selected because it is the largest local government organisations in South African and it is assumed that it will therefore display the most formal and best funded knowledge management implementation at local government level in the country.

1.2.4.1 The City of Johannesburg

The City of Johannesburg is a metropolitan municipality and classified as Category A. It is based in the Gauteng province and administers the local government of Johannesburg. The City of Johannesburg has a population of 3.2 million which translates to 7.3% of the South African population. In 2005, seventeen per cent (17%) of the South African Gross Domestic Product, and fifteen per cent (15%) of South African employment was from Johannesburg.

Johannesburg is an important South African administrative centre, as it has most of the government departments. The City has been partitioned into seven administrative regions with different structures of management. Each regional office manages the City's full range of administrative, community development, housing, infrastructure and services, social, development planning and urban management and economic development, emergency management services, environmental management, health, metro policy and transport services within each region.

Challenges experienced by the City of Johannesburg include high unemployment, severe poverty and economical exclusion of the majority of people of this country.

1.2.4.1.1 Management Structure

The Executive

The Executive Mayor leads the political administration of the City of Johannesburg. The Executive Mayor has executive powers and manages the daily affairs of the City. He or she is assisted by the Mayoral Committee.

Administrative

The City Manager heads the administration of the City of the Johannesburg. The City Manager is the accounting officer and is responsible for the financial affairs of the City. The City Manager works with the Executive Management.

1.2.4.1.2 Legislature

The legal functions of the Council are to approve rate charges, by-laws, budget and the Integrated Development Plan. The Mayoral report and public comments provide feedback and interaction in performing the legislative Council duties. Community and stakeholder consultations are done to help with inclusive decision making. Ward Councillors and Ward Committees work directly with the communities.

1.3 Problem Statement

The South African local government has a duty to deliver the basic services to communities. According to Gafoor and Cloete (2010), local municipalities are bound to deliver services as stipulated by legislation set out in the Municipal Systems Act (No. 32 of 2000), Batho Pele principles and Integrated Development Plan.

However, the government is failing its service delivery mandate to the community due to poor or absence of knowledge management practices. The problems related to the lack of knowledge management practices are the loss of business knowledge, high costs and lack of competitiveness.

To improve service delivery and remain competitive, the local government has to change and modernise its operations. The local government needs to be conscious of the importance of knowledge management (Haricharan, 2004)

Martin (2003) observed: that it has become common practice for local government to embrace the concept of knowledge management in theory, whilst in practice municipalities are still

wedded to traditional command and control approaches and in some cases they display an outright rejection of knowledge management.

In South Africa there is an urgent need for improved service delivery. With service delivery being the paramount functions of the local government, local municipalities are compelled to change to knowledge value added services. It is believed that knowledge management practices are a strategy that will improve the quality of performance at the local government. Munzhelele (2012: 29) indicated that the implementation of knowledge management will improve service delivery.

There is not much research conducted on the knowledge management standard operating practices in most local government in South Africa. An observation is that there are no established knowledge management practices in the local government has motivated this thesis.

1.4 Research Objectives

The thesis investigates knowledge management practices in the local government. The main objectives are:

- To establish the existence of knowledge management (formal or informal) practices in the local government.
- To establish if there is an existing and functional knowledge creation and sharing culture.
- To establish if there are technological resources available to facilitate effective knowledge management.
- To ascertain if the organisational strategy and structure are conducive to knowledge sharing.

This investigation will comprise of conducting a survey and an interviewing the senior managers in the local government.

1.5 Research Questions

1. Has the local government embraced knowledge management?
2. What challenges face the local government in terms of knowledge management practices?
3. How are the current knowledge management practices in the South Africa's local government?

1.6 Research Purpose

The local government in South Africa does recognise knowledge management's value add in a firm in terms of improving performance and service delivery. This is evidenced by the knowledge management conferences and workshops that are regularly organised by the national local municipal body, the South African Local Government Association.

However, the drawback experienced is that there is evidence of knowledge management being introduced in the SA municipalities, there are, however, no visible benefits or progress thereof. Whilst local municipalities recognise knowledge management's value add, they are not reaping the full benefits of knowledge management, because knowledge management practices are variably embedded in their organisations.

Given the challenge "this sphere of government is facing in terms of delivering the much-needed services to the local communities, it goes without saying that the local government municipalities should and must adopt and implement knowledge management as a management tool urgently. Otherwise, the status quo will remain."

The aim of this thesis is to determine the nature and level of knowledge management practices in a selected local government in South Africa, namely the City of Johannesburg. On the basis of the results of a survey and a follow-up interview with the person responsible for knowledge management at the municipality, recommendations are made regarding knowledge management practices that might be developed and better supported in other local municipalities in South Africa.

1.7 Research Significance

The findings are significant both to academics and knowledge management practitioners in the public sector. According to Dewah (2011), knowledge management is a relatively poorly understood notion at the local government level, since it has hitherto been the preserve of business firms and national government initiatives. Therefore the result of this thesis will also benefit local municipalities in general since there is not much knowledge management research conducted in this sphere of government.

The absence of knowledge management is one of the reasons for poor service delivery by local government. It has been established that correctly implemented knowledge management add value and contribute to organisational success.

This thesis will also look at methods in which the municipalities can facilitate knowledge management and improve service delivery. Better knowledge management practices (or best practices) would probably improve service delivery at local government. The local government can also use the recommendations of this thesis to improve its knowledge management application where there is a gap.

1.8 Definition of Key Concepts

1.8.1 Knowledge Management

There are varied approaches to knowledge management hence there is no universal definition. The discipline, scope and content in literature on knowledge management are varied (Wiig 1999; Monavvarian and Kasaei, 2007). Current trends are to define knowledge management as a discipline, although it is a multidisciplinary field (Jasimuddin, 2006), or a strategic approach (Sveiby, 1997, Malhotra, 1997). An alternative approach is to define knowledge management as an object or process (Quintas et al. 1997, Choi 2009).

Davenport (1997) refers to knowledge management as “a methodical business process of acquiring, processing and transmitting tacit and explicit knowledge so as to improve productivity.”

Newman and Conrad (1999) defined it as follows: "Knowledge management is a discipline that seeks to improve performance of individuals and firms by maintaining and leveraging the

present and future value of knowledge assets.” For Gunjal (2005:37) it is "the process of gathering, managing and sharing employee’s knowledge capital throughout the firm."

All these definitions share a concern with the three main knowledge management processes, namely acquisition, sharing, and application. McNabb (2007) brings in the social perspective of knowledge management as involving human and social settings, the use of technology and the concept of knowledge. There is agreement that the main role of knowledge management is improved organisation performances (Hinton, 2003) as information will be readily available to the employee (El Aziz, Wahba and El Sagheer, 2013:1355)

In this thesis, knowledge management would be defined to reflect the practices of development as well as organisational practices of embedding the firm’s knowledge base in ICTs, organisational culture, structure, people and leadership.

1.8.2 Knowledge Management Practices

Knowledge management practices comprise the activities and procedures of obtaining and utilising knowledge according Magnusson (2003). Knowledge management practices are categorised as facilitating and intervening activities. Knowledge management process include knowledge creation, evaluation, documentation, communication, and evaluation and implementation (Singh and Soltani, 2010).

1.8.3 Service Delivery

The Batho Pele White Paper (Part 1.1.1) points out the criteria for judging the South African Public service is its effectiveness in meeting the citizens need.

Service Delivery is the delivery of a service and or product, by a government institution to the citizens (Riekert, 2001: 90). Government institutions deliver services and or products because communities are unable to effectively satisfy all their own needs.

The highest function of government is service delivery. Elected officials must ensure that service delivery is promptly and effectively carried out, and should accept failure if this is not done. The electing public must demand an explanation if there is poor service delivery (Riekert, 2001:89).

1.8.4 Local Government

Ismael (1996:12) definition of local government is “that level of government which is commonly defined as decentralised, representative institution with general and specific powers devolved to it by a higher tier of government (central or provincial) within a geographically defined area.”

In South Africa there are three levels of government, namely national, provincial, and local government. Local government in turn can be sub-divided in metropolitan councils in the big urban areas, traditional municipalities, and district municipalities in rural areas. The particular case study focuses on a metropolitan council where one would expect knowledge management practices to be formalised—an expectation that won't hold for rural municipalities.

1.9 Structure of the Thesis

This thesis consists of six chapters and is structured as follows:

Chapter 1: Introduction

Chapter one provides an introduction to this thesis and consists of introduction, local government in South Africa, problem statement, research questions, research purpose, research objectives, definition of key concepts and structure of the thesis.

Chapter 2: Theoretical background

Chapter two discusses the theoretical background of this investigation. There will be differentiation between data, information and knowledge. The knowledge management enablers: people, processes and technology will then be discussed. The (knowledge management enablers) factors that are discussed in this chapter are: leadership, people, business culture, and business structure and information technology. The following part discusses knowledge acquisition, knowledge transfer, knowledge sharing, knowledge protection and retention. The chapter concludes by explaining the model used to collect data for this thesis.

Chapter 3: Literature review

Chapter three is the literature review. The literature review focuses on knowledge management in the local government with focus being in South Africa. The chapter discusses knowledge management both in the local government and the public sector.

Chapter 4: Research method

The design and methods utilised are discussed in Chapter four. The thesis has adopted the mixed method. Data collection methods, reliability and ethical consideration are validated. Limitations of the investigation are also discussed in the fourth chapter.

Chapter 5: Research findings

Chapter five describes and analyses the findings that are obtained during the data collection process. Chapter five presents the data analysis, findings from the survey and the discussion of the findings.

Chapter 6: Conclusion and Recommendations

Chapter six concludes the thesis, makes recommendations and proposes further research.

CHAPTER 2: THEORETICAL BACKGROUND

2.1 Introduction

The theoretical background of the thesis and discussion on the knowledge management shall be presented in chapter two. It starts by explaining the differences between data, information and knowledge – which are wrongly used interchangeably. The subsequent part discusses the knowledge management enablers, which Yeh et al. (2006) referred to as the driving forces behind knowledge management.

2.2 Data, Information and Knowledge

This part explains the differences between data, information and knowledge. This is a standard distinction drawn in knowledge management theory and functions to explain why organizations need to go beyond their well-established information management practices to address knowledge aspects too.

2.2.1 Data

In the usual scheme data is the representation of observed, but yet unexamined and uncontextualized facts (Loshion 2001; Robbins et al. 2000; Zikmund 2000). In other words, data are objective facts observed about events (Davenport and Prusak, 2000:2), which are the raw material for generating information through the way in which data is represented, linked and contextualised.

2.2.2 Information

Drucker (1998) sees information as “data endowed with relevance and purpose.” According to Al-Athari and Zairi (2001) information is part of knowledge, because it is its raw material, but knowledge is something more, namely that with which information is interpreted. Information can be found in various artefacts built with data, such as documents or reports. Information is objective as it is different things in different contexts, just like data (James 2005). Lundu (1998:45) defines information “as anything able to influence a person’s decisions and actions in a social setup with other humans.”

2.2.3 Knowledge

The concept of knowledge is hard to grasp as it includes data and information but the two do not exhaustively explain knowledge. Knowledge has a different meaning to people in different circumstances. Knowledge can be incorporated in an organisation's practices routines and processes (Henczel 2004: 92). Knowledge is an asset and fosters constant improvement to ensure global competitiveness. Knowledge is a dynamic resource, it is ever evolving and an investment to get the latest and most relevant knowledge is important.

Knowledge is defined by both data and information. The knowledge formation process starts with raw data manipulation into processed information then knowledge (Gaffoor and Cloete, 2010:2). Lee (2003: 45) asserts that the comprehensive definition of knowledge is complex.

According to Henczel (2004: 92), knowledge can be embedded in business standard operating procedures. Business scholars argue that knowledge is a contextual concept as it has different meaning in different contexts. The importance of knowledge is now without question (Martin, 2000:17). Knowledge is primary driver of a firm's growth and competitive edge (Wang et al. 2009). According to Milam (2001), knowledge should be well managed as it gives the ultimate competitive advantage.

Knowledge is categorised as explicit and tacit knowledge respectively (Mayekiso, 2013)

2.2.3.1 Explicit knowledge

Explicit knowledge is codified or articulable in a formal manner in standard operation procedures and is therefore transferable.

Skyrme (2001: 7) defines explicit knowledge as "that which can be codified, such as in documents and databases". For Capurro (2004: 48) explicit knowledge is a synonym for information. Nonaka and Toyama (2003) sees explicit knowledge as that which can be expressed in words or represented in figures. In other words, explicit knowledge can easily be articulated, communicated and codified (Grover and Davenport, 2001; Abell, 2001).

2.2.3.2 Tacit Knowledge

Chisholm and Holifield (2003) articulate that tacit knowledge is essential for organisations as it involves learning though the learning process will most probably not be documented. Tacit knowledge are those embodied skills or know-how that is not easily expressed in words and best acquired through experience.

2.3 Knowledge Management Enablers

Yeh et al. (2006) refer to knowledge enablers as the driving forces in the carrying out of knowledge management. Knowledge management enablers are what some authors call critical success factors. They generate knowledge in the organisation and also motivate group members to communicate knowledge within the group allowing organisational knowledge to expand.

Knowledge management enabling factors that are discussed below are leadership, business culture, people, information technology, business structure, knowledge acquisition, knowledge sharing, and knowledge protection and retention.

2.3.1 Leadership

Effective knowledge management is leadership driven and fosters a knowledge inception and transfer environment. According to Schein (2004: 12), leadership shapes the value and belief system of an organisation as it is responsible for all activities at all levels within the firm/organisation. Leadership is therefore instrumental in organisation aspects like business structure development and making decisions in creating, distribution and utilisation of knowledge (Singh and Kant, 2008). It then follows that leadership has an instrumental role in knowledge management. Without the will and initiation from management, there will not be knowledge management.

2.3.2 Business Culture

Knowledge management is a strong positive function of business culture (Gold, Malhotra, and Segars, 2001). The shared practise and or beliefs of the people in a firm are what constitute the business culture, accordingly McDermott and O'Dell (2001: 77). Cameron and Quinn

(2011:19) said the importance of a business culture is that it provides an unwritten code of conduct and gives employee identity.

According to Mavondo and Farrell (2004), the culture of a firm influences how people respond to a situation. The company's business culture is reflected in its philosophy and vision, management style, and its physical organisational structures, such as architecture of buildings and layout and design of rooms (Martins et al., 2001:110).

A knowledge-friendly business culture will support knowledge activities such as knowledge creation, codification, sharing, and integration (Janz and Prasamphanic, 2003). The culture might manifest in reward and incentive systems for knowledge sharing (Chua, 2003; Jacobs and Roodt, 2011) as well as include aspects like trust and collaboration in addition to incentives (De Tienne, 2004). The next sub-part discusses trust, collaboration incentives.

2.3.2.1 Trust

Krogh (1998) defines trust "as the ability to leniency when making judgment, having the courage to voice one's views, having an interest in the various viewpoints and experiences in a firm." Trust is an important part of a knowledge-friendly culture that helps inspire the relationship between individuals and groups, thus encouraging knowledge sharing and transfers (Sveiby, 2001; Alawi et al., 2007; Singh and Kant, 2008; Renzel, 2008). According to Singh and Kant (2008), when employees believe in the integrity, character and competence of one another, then trust is considered to be present in a firm. Trust is assumed in knowledge sharing (Yeh et al., 2006), both from the perspective of the contributor (who trusts that others won't take advantage of his/her contribution) and the recipient (who trusts the content of what is shared). There is a heavy price to pay for low trust because several elements such as personal involvement, commitment and business success are affected, as opposed to a surrounding that has high trust level (Serrat 2009; Dean 2008).

Knowledge exchange, transfer of new information and tacit knowledge is encouraged by trust (Sheriff and Sheriff, 2008). Employees will only share knowledge where there is trust. Whenever an individual receives knowledge, it benefits the firm as the receivers knowledge increase and they are able to perform better (Sheriff and Sheriff, 2008). Management should create an environment where mistakes, caused by non-negligence, are not punished as they

lead to employees learning. If there trust deficit, learning and knowledge transfer will not happen effectively in an organisation.

According to Davenport and Prusak (1998), firms should create a “learning” work environment. Knowledge management initiatives will not work if there is trust deficit added Davenport and Prusak

The following largely depend on trust, processes of sharing, distribution and utilisation of knowledge (Ngulube, 2005). Firms should build a culture that enables trust, transparency, and enables sharing knowledge.

2.3.2.2 Collaborations

Collaboration is a cultural aspect which contribute to knowledge management success. Collaboration is the level to which group entities assist one another in a group effort (Lee and Choi 2003). In the workplace, a collaborative culture creates space for the exchange of improved knowledge, which enables knowledge creation (Krog, 1998). The benefits of collaboration are increased freedom, encourage new ideas, and increases tendency to take risks. Lee and Choi (2003) shares the sentiment that collaboration reduces fear within a group and increases openness among group members. Collaborations are a core concept in knowledge sharing and favours creating and transfer of knowledge. Collaboration creates a conducive surrounding for knowledge workers to openly share knowledge - often resulting in successful knowledge management programmes (Faher and Prusak, 1980)

According to Slater (2004), attributes of collaborations are: a) universal/common aims, interdependence of work; b) equality and c) free will.

2.3.2.3 Incentives and Rewards

According to Riege (2005) incentives “have the capacity to stimulate determination or action by employees within a firm”. Therefore they are ways of influencing the behaviour of employees.

Reward systems act as incentives for knowledge management activities as it is an integral structural factor used to alter personal attitudes about knowledge transfer and creation. (Hurley

and Green, 2005). Well-structured systems of reward enhance knowledge management activities.

Syed-Ikhsan and Rowland (2004) said employees generally need motivation, intrinsic or extrinsic to share knowledge. It is realistic think that workers think of what they gain or lose by offering knowledge Makela, Kalla and Piekkari (2007). With this in mind, a lack of incentive system results in reluctance to transfer knowledge (Davenport, 1997), a fact which Soo et al. (2000) agrees with.

The right culture then becomes important as it encourages employees to share and create knowledge. In addition, the right culture provides assistance and incentivises knowledge related activities as this is important for knowledge management (Holsapple and Joshi, 2001).

2.3.3 People

Goh (2006) is of the school of thought that because people create and share knowledge, they are the heart of business knowledge. Syed et al. (2004) assistance the above notion people are “the true agents in business where all tangible and intangible assets are a result of human action and depend ultimately on people for their continued existence.”

Human are the most valued component of knowledge management as it is based on the peoples’ tendency to share knowledge and re-use it. Also knowledge is kept within individuals (Cong and Pandya 2003). Knowledge management is the platform used to transfer individual knowledge to a group for the benefit of the firm.

2.3.4 Information Technology

Information Technology is pivotal in knowledge management. The importance of information technology is in its capability to enhance communication in collaborations, knowledge sharing and knowledge mining (Davenport and Prusak 2000). Information technology also plays a dual role of enabler and pivotal contributor to knowledge management.

Chourides et al. (2003), Ruggles and Leug insist on the dependence of knowledge building on information technology. Information technology enable the different forms of knowledge building and enables the communication of the created knowledge. Knowledge management uses information technology as the foundation for implementation (Anumba et al. 2005).

Information technology coupled with the internet makes information search, access and retrieval possible. Communication boundaries that inhibit interaction are minimised or removed with the utilisation of information technology in a firm. The Web, internet and other knowledge packaging technologies are increasingly being relied on by firms (Cong et al., 2007). Technology important as an enabler that assists people with information is not a solution or substitute to knowledge management (Cong and Pandya 2003). Davenport and Prusak (1998) caution against over reliance on ICT and the delegation of knowledge management to ICT by firms. What is important to realise is that information technology are crucial in effective knowledge management tool in creating knowledge framework. Information technology is not a solution to challenges regarding knowledge management (Lundvall and Nielsen, 2007:208).

2.3.5 Business Structure

Claver-Cortes et al. (2007:47) defined an organisational structure as all the ways in which work can be divided and coordinated into different tasks. They argued that in order to facilitate knowledge creation, sharing application, firms should adopt business structures which would allow knowledge to flow. In their view, such business structures tend to be increasingly organic and flexible. Traditional business structures ((for instance. bureaucracy and task force) don't assistance knowledge creation in a firm (Nonaka and Takeuchi (1995:160). Sinofsky (2005) defines bureaucracy as management or administration marked by top-down authority among numerous offices and by fixed procedures.

Halachmi and Bouckaert (1995: 89) said bureaucracies that are lethargic and unresponsive should be replaced by decentralised, flexible, adaptive, competitive, learning, customer-oriented, lean, creative and streamlined firms in order to build a foundation to improve quality and productivity.

Networks are the best structure to implement knowledge management. The network is composed of virtual a team which allows the organisation an advantage as it gives multi skilled groups

2.3.6 Knowledge Acquisition

Pjb (2001) defined knowledge acquisition as a “process whereby enterprises define, acquire the skills, know-how and strategic intelligence necessary to carry out the day-to-day activities.”

In a firm, the knowledge and experience is posed by the employees as individuals. This makes the firm depend on the ability and willingness of employees to utilise their knowledge and experience for the benefit of the firm. A big role of knowledge management is therefore to elicit experience and knowledge from employees (Garilova and Andreeva, 2012).

Formal structured education, experimentation, training and self-learning are all ways of learning. If the knowledge obtained is not distributed and remains with the ‘knower’, the knowledge becomes of no value to the firm states Antal (2003).

Knowledge acquisition is a complex process because of the nature of knowledge which makes the interaction between the one who transfers knowledge and the one who receives it quite complex (Szulanski, 1996). The intended knowledge receiver may lack the capacity to absorb the knowledge hence hinder the knowledge acquisition process. Absorption of unrelated knowledge by a firm requires more effort because of late of absorptive capability. A negative attitude in learners to learning and sharing will hinder the knowledge acquisition. There is need for the learner to perceive the knowledge gained by the learning process as important and the knowledge giver as an important source to facilitate better knowledge absorption (Ford and Staples, 2006).

Knowledge and experience in a firm belong to employees, and not to the firm. This puts the firm in a position where it entirely depends on the willingness of employees to use that knowledge and share it for the benefit of the firm. Thus one of the roles of knowledge management is to elicit knowledge from employees who possess knowledge (Garilova and Andreeva, 2012).

Individual employees gain knowledge in different ways of learning in a firm; they may obtain knowledge through education and training. Antal (2003) pointed out that acquiring knowledge should be accompanied by its distributed, because knowledge not shared cannot be leveraged throughout the organization.

The process of knowledge acquisition has an undesirable side effect of losing talent and relationship (Tiwana, 2008: 51). The important components of knowledge acquisition are willingness to learn and ability to acquire and utilise knowledge. Knowledge acquisition has become of paramount importance as there is no firm which has a monopoly on the best knowledge according to Leonard-Barton (1995).

2.3.7 Knowledge Sharing

Turban et al. (2004) define knowledge sharing as “the wilful application and transfer of one or more person’s ideas, insights, solutions and knowledge to another person(s), either directly or via an intermediary, such as a computer-based system. This sharing occurs during induction (of new employees) or when employees quit the firm. Knowledge sharing includes transferring or disseminating knowledge in the entire business.

Knowledge sharing includes:

- All activity that aims to share knowledge and expertise among researchers, policymakers, service providers, and other stakeholders to promote evidence-based practice and decision making.
- Situations in which knowledge sharing may not be an explicit goal, but knowledge and expertise are shared nonetheless.

The best way to utilise tacit knowledge is by direct transfer to another individual so that it becomes explicit knowledge to be utilised by the whole firm. The fact that tacit knowledge makes certain individuals feel powerful makes them reluctant to share the knowledge as they feel knowledge will help them rise through the ranks (Chen 2003:422). The ‘knowledge is power mentality’ results in differences between their employees’ personal agendas and the interests of the firm in sharing knowledge.

Junnarkar (1997: 32) says that the most important driver to stimulate knowledge sharing is connecting people with people. Effective knowledge sharing findings in the growth of a firm’s intellectual capital which is undisputedly one of the most important assets of any business (Smith, 2008: 171). In essence, knowledge sharing occurs when those with more knowledge help those with less to acquire and master it (Dickinson, 2012:150). Quinn, Anderson and

Finkelstein (1998: 193) emphasise the value of sharing intellectual assets because, they believe, they increase in value with use unlike physical assets. Abell (2006, 57) advocates that sharing of knowledge is beneficial to the receiver as well as the person who shares the knowledge as they become enriched in the process.

There is consensus that knowledge sharing is happening in most firms; however, the challenge is that it is totally uncoordinated (Webb, 1998). According to Jantz (2001) the focus should be on the formalisation of knowledge management practices. There are various ways of sharing knowledge in a firm, for instance through the Communities of Practice or through SharePoint implementations.

2.3.7.1 Communities of Practice

Communities of Practice (COP) are a group of people bound together by a common purpose and an internal motivation. The central feature of COPs is the relationship that develops between their members; it is here that the key to understanding the softer aspects of knowledge is to be found (Kimble and Hildreth, 2005).

A community of practice is a network of individuals with common problems or interests who get together to indulge in (Leask et al., 2008):

- Exploring working ways
- Identifying common solutions
- Sharing good practice and ideas

According to Cadiz et al. (2006), communities of interest change either suddenly or can be setup formally. Communities of practice share four common components i.e. shared vocabulary, open communication, learning from the other and remembering previous lessons. Technology and ICTs allows networking and sharing as they overcome geographic position challenges. Technology encourages the flow of knowledge across and within firms and enables self-improvements (Leask et al., 2008).

2.3.8 Knowledge Retention

Knowledge retention is “about focusing on the critical knowledge that is at risk of loss, prioritising what is at risk based upon potential knowledge gaps and their impact upon overall business performance, and then developing actionable plans to return on investment effects on the firm (Kirsch 2008).”

Firms are facing a challenge of protecting their knowledge and struggling to reduce the loss of essential knowledge whilst experiencing a high number of retirees. When a company has gained knowledge it usually doesn't remain with the firm forever. Knowledge that is gained over time can be lost through re-business or with merger of various companies (Levy, 2011)

There are two ways in which firms lose critical knowledge which are (1) the retirement of managers and executives or when they leave the workforce (2) the number of qualified young force getting smaller. Employees being transferred may lead to inefficiency and knowledge loss. Another cause of loss of business knowledge is job cuts and attrition.

Kris (2008) noted that firms should try and make sure that knowledge and expertise are retained so that when employees leave the firm they do not go with knowledge. When there is lack of knowledge strategies firms often lose tacit knowledge when employees leave

Wamundila and Ngulube (2011) is of the notion that “knowledge can be preserved in a firm using various strategies such as education, establishing communities of practice and professional networks, training, documenting the processes and use of advanced technology to capture work processes.”

A study conducted by Department of Public Service Administration in South Africa (2008), confirmed that government loses substantive operational knowledge when employees leave through resignation, retirement or unplanned events. This phenomenon poses a serious challenge for business continuity in both government and other organs of the State and impacts negatively on service delivery and productivity. Huseman and Goodman (1999) point out the danger of the failure to capture knowledge is that the company may be unable to respond timeously to the market needs or other challenges because of lack of knowledge or skills.

The firm should ensure that knowledge and expertise are retained so that when employees leave the firm they don't go with knowledge. When there is lack of knowledge strategies, firms often lose tacit knowledge when employees leave (Kirsch, 2008).

2.3.9 Conclusion

This thesis investigated knowledge management practices in the local government in South Africa. The City of Johannesburg was selected as a case study. The City of Johannesburg is a local government in the Gauteng province, South Africa. The case study utilises Daan's Botha's (2005) survey instrument based on his Knowledge Management Assessment Model. The Knowledge Management Assessment Model is focused on Leadership intent expressed as vision, strategy and objectives that give direction and alignment to business Culture, Structures, Processes and Technology.

The structure and content of the questionnaire were benchmarked against Skyrme's Knowledge Management Assessment Tool of Arthur Andersen and that of the American Productivity and Quality Centre (1995).

CHAPTER 3: LITERATURE REVIEW

3.1. Introduction

Chapter three is the literature review. The focus is on the knowledge management practices in the local government. This part first discusses the knowledge management in the public sector. The subsequent part discusses knowledge management in the local government.

3.2 Knowledge Management in the Public Sector

During the past decade, research on knowledge management has emerged as a new direction in the management literature. At the same time many governments have started to be aware of the challenges that have forced them to think about new approaches and practices that can help them to be competitive (Chua and Goh, 2008).

Literature indicates that knowledge management operations/practices in the public sector are not common (Arora, 2011; Okunoye et al., Zaharove 2004). Factors which favour knowledge management (Organisation for Economic Co-operation and Development, OECD, 2003) include:

- Low efficiency and duplication of duties
- Enhanced transparency
- Attracting skilled job seekers as there is a chance for lifelong learning.

Yao et al., (2007) said knowledge managing is complex. Skyrme (2002) further said knowledge management best practises are still emerging hence there is no defined guide on knowledge management.

3.2.1 Knowledge Management Benefits in the Public Sector

Most studies on knowledge management focused on the practices and experiences of the private sector; however, there are also knowledge management benefits in the public services. Wiig (2000:225) argued that if the public sector can make an effort it would benefit from

knowledge management. Wiig (2002:224) further argued that, knowledge management can introduce new options, capabilities, and practices to help public administration advance.

The literature has revealed that knowledge management has become widespread with many firms because of its benefits. Knowledge management according to Pandya (2003) include:

- Knowledge management creates the opportunity for employees to develop their skills, performance and experience through group work and knowledge sharing.
- Knowledge management improves organisational performance by means of better quality, creativity, productivity and efficiency.
- Knowledge management increases the financial worth of an organisation.
- Knowledge sharing creates value in an organisation and strategically enables a competitive advantage.
- Knowledge management has mostly been associated with profit-making corporations which maybe a major reason for the organisational culture that predominates in the public sector.

Wiig (2002) pointed out areas where knowledge management could contribute significantly:

- Better decision making
- Improved public participation
- Developing a knowledge competitive force

The public sector can benefit from implementing knowledge management strategies effectively. Public and private firms have realised that knowledge management is no longer an option as it gives an advantage (Davenport and Prusak 1998).

3.2.2 Knowledge Management Studies in the Public Sector

There is much that is not known in knowledge management. Studies of knowledge sharing, management and decision making have been done by some researchers including Syed-Shields et al., (2000), Syed-Ikhasan and Rowland (2004), and Chen (2003),

The researchers also studied perception associated with managing knowledge in a firm for example benefits and technological issues.

Syed-Ikhsan and Rowland (2004) showed that the ministry that they studied did not have a concessive knowledge management strategy. Instead, knowledge management was incorporated in the standard operation procedures. This led to the conclusion that employees viewed the management as the one with the responsibility of managing knowledge with less than half of them feeling that it was everyone's responsibility to manage knowledge.

Another study by Liebowits and Chen (2003) was conducted with the focus of the study being how knowledge management can initiate and nature knowledge sharing culture in a firm. The result showed that in government, knowledge sharing had severe structural challenges like hierarchies and bureaucracies a similar study by Shields et al. (2000) showed that information and knowledge initiatives to be political and have unequal impact on different class of civils and civilians.

Wiig (2002) did research of knowledge management in the public administration. The focus was the influence of knowledge management on improving decision-making in public sector, culturing competitive socio-capital intellectual capabilities, assisting the public in participating in decision making; and building a knowledge management work force. The results showed the importance of an inclusive knowledge management as it makes people and organisations work smarter and prosper.

The evidence from field studies show that knowledge management is now an established field as articulated by Holtham (1997). Knowledge management is now a primary source on which knowledge hinged operations should be based. (Girard, 2004)

Knowledge management started as a way of responding to operational inefficiencies in America and Europe. The international precedence was taken note of in South Africa, hence

knowledge management began to be explored as a government tool at the beginning of 2000. Initiatives to promote knowledge management were started for example by the Department of Communication (Municipal Institute of Learning, 2010).

3.2.3 Reform and restructuring of the South African Public Sector

Democracy has seen changes in the South African public service sector. The New Public Management (NPM), borrowed from the private sector, is a business reform. The international public-sector reform of the 1990s was also introduced. All these reforms placed importance on financial efficiency. (Lane 2000, Sarker 2006).

The White Paper on Transforming Public Service Delivery (1997) pointed out eight guiding principles which are:

- The need for public consultation to determine the quality of service provided.
- Citizens must be educated about set service quality standards
- The need for treating the public with respect.
- Citizens should have accurate and complete information about the public services provided
- Customer complaints must be considered and action taking, accompanied by an apology if there was wrong doing
- Transparency is important for citizens to have adequate knowledge on management and governmental departments.
- Citizen should get service which is in line with what they pay for

The success of Batho Pele will be determined by the progress made in efforts to transform the public service as well as transformation occurring in society in general. While there is scope of success, the limitations are more likely to be in the form of inherent qualities of the public service such as the bureaucracy and extensive legal regulations, noted Maloba (2015).

In the nineties, when South Africa was undergoing change, knowledge management was introduced around the developed countries. Thornhill and Van Dijk (2003), stated South African “public service has experienced intensive reorganisation since 1994. Change therefore launched South Africa’s re-emergence in the global economy as a new democracy and an emerging knowledge economy.

3.3 Knowledge Management in the South African Public Sector

There is increased international interest in knowledge management as an aid in giving a competitive advantage.

Advances in knowledge management are mostly pushed by multinational firms or private commercial organisations. The potential for government to improve knowledge management should be pursued given the benefits which include improved transformation, performance, and the development of a more up-to-date and responsive citizen-centred government (Al-Khour, 2014).

In the below part, focus is on the knowledge management in the South African public sector.

3.3.1 Knowledge Management background in the South African Public Sector

Knowledge management as a strategy is relatively new in developing country firms even government firms (Chawla and Joshi, 2010). Various scholars have conducted studies that prove that South African firms were implementing some form or another of knowledge management, either explicitly or implicitly (Mbhalati, 2010).

In the South African context, extensive efforts have been made by the Department of Public Service and Administration (DPSA) as well as the Government and Information Technology Officers Council (GITOC), to introduce knowledge management as a practice in the public sector government departments. Collaboration with the private sector institutions such as the Development Bank of South Africa (DBSA) has also been forged to ensure an integrated effort as well as to learn from the DBSA how to implement knowledge management, (Munzhelele, 2012).]

Knowledge management was introduced by DPSA in the public sector by collaboration with the Learning and Knowledge Management Programme (LKMP) in 2001. Since then,

knowledge management has been getting receiving priority within the context of the South African public sector. In 2007, the Department of Provincial and Local government, now Cooperative Government and Traditional Affairs, identified knowledge management as a key skill for all senior management at local government level.

The GITOC and the State Information Technology Agency (SITA) were established to deal with the use of ICT in the South African Public Sector. SITA is currently addressing issues such as e-government and Open Source software, which is still in its infancy. It should be noted though that emphasis is mostly on information technology, an enabler for knowledge management.

Knowledge management was identified as a tool to improve service delivery. Knowledge management was also to be used as a mechanism to facilitate “Batho Pele” (People First) principles. In 2002, the DPSA agreed with the Department of Communications to introduce and publicise the merits of knowledge management throughout the country. In 2003, the Learning and Knowledge Management Network was introduced (Mphahlele, 2010).

The DPSA has initiated the following programmes:

- There has been an information platform in the form of a newsletter and journal.
- There is an annual indaba and a workshop where speakers discuss different knowledge management issues.
- Research meetings have been held since 2015 where research and development issues in the public sector are discussed.
- The Annual Service delivery Learning academy acts as a learning network and attract a lot of public service.
- An internal newsletter called Rutanang which is a Sotho word for educate each other. This newsletter is aimed at the DPSA and is based on the sharing of knowledge and learning among the DPSA staff. Rutanang sessions are also held periodically where speakers are invited to present on and about topics of interest and significance to the DPSA staff.

- There are plans to have a national database where all projects are stored and everyone can have access.

South Africa poses a unique surrounding for knowledge management. This has been recognised by various researchers, including Kruger and Johnson (2010: 58), and Tobin and Snyman (2008: 133). As observed by Kruger and Johnson, the South African surrounding offers challenges to effective knowledge management implementation because of some barriers, some of which are listed below:

- The diversity of its people portrays a challenge to the amalgamation of the various cultures particularly the Western cultures (of the Whites) and the African cultures (the African traditional values).
- Government policies such as Affirmative Action may give one group an advantage over another, this has an influence on job security and unwillingness of people to share knowledge.
- 11 official national languages affect communication hence knowledge
- The diverse ways South African firms are managed with European, African and Asian cultures to leadership styles coexisting make leadership a complex phenomenon.

Evidence shows that South African public sector has implemented knowledge management but still a lot needs to be done as the majority of government departments have not implemented the systems

3.4 Knowledge Management in the local government

Knowledge Management is an effectively management tool that can be applied in all institutional settings through maximum use of the wide-ranging knowledge existing in firms such as the local government (Gafoor and Cloete, 2010, Mavodza and Ngulube, 2012).

Local governments have shown interest in implementing knowledge management initiatives that manage their knowledge resource by capturing, managing, and controlling their intellectual human resources. “Firms must be in sync with their clients so that they can provide better services and understand their clients’ needs (Fowler and Pryke 2003).”

3.4.1 Framework for knowledge management in the local government

Leading and learning are key for the development of local government. There is need for inter-learning and inter leaning in municipalities (SALGA 2001), which means what is known should be established and maximised as lessons from past success and failures of themselves and others. The Intergovernmental Relations Framework Act 2005 provides legislative reasoning for knowledge sharing. Under part 4, the act includes the following:

- i. In doing business all government institutions must strive to achieve the object of this Act by, inter alia
 - a) Co-ordinate their actions when effecting government policy and avoid duplication
 - b) Ensure adequate institutional capability and efficient procedures
- ii. Consultation, co-operation and sharing information with other structures of state; and
- iii. Promptly response to cooperation and consultation requests by other organs of state

3.5 Knowledge Management studies in local government

The part below focuses on the knowledge management conducted in the local government in South Africa.

Municipalities are there to deliver the basic services such as sanitation and water directly to the local communities. This forms part of their constitutional mandate. However, there is a concern that municipalities in South Africa are failing to deliver quality service to the local communities.

Knowledge management can assist municipalities bettering the quality of services they are rendering to the local communities. “Knowledge management is of critical importance in maintaining and boosting local government performance and sustainable superior service delivery in today’s rapidly transforming global surrounding” (Lai, Hsu, Lin, Chen and Lin, 2014). According to Ramsey and Barkhuizen (2011)), “Knowledge management allows firms such as the local government to secure knowledge and convert it into new action repertoires to inform change practices.”

In South Africa, and the world at large, there is inadequate research conducted on the knowledge management practices at local government level which this thesis wants to help correct.

3.5.1.1 Knowledge Management challenges in the South African local government

Knowledge management has become a priority in the South African local government. There are, however, some problems in terms of knowledge management (SALGA, 2013)

- High technical and professional personnel turnover
- Limited resources.
- Expensive consultation cost
- Incapability in certain municipalities to provide the critical set of municipal services.
- Ineffective financial management for example undesirable audit outcomes.
- Fraudulent activities and corruption.

Gaffoor and Cloete (2010), noted that most South African municipalities lack formal and functional knowledge management programmes. Knowledge sharing cultures does not exist across municipalities,

3.5.1.2 Why the South African local government needs Knowledge Management

An effective and efficient local government service is urgently needed in South Africa. Local government needs to bring about balance, juggling financial sustainability, addressing past inequalities, delivering services, whilst fulfilling its developmental mandate (South African Cities Network, 2013).

According to Cong and Pandya (2003:29), local governments need knowledge management for the following reasons:

- Increased competition from private forms offering the same service
- Pressure to deliver customised services

- High knowledge loss due to transfers and retirement
- Jobs nowadays are dependent on employees knowledge not skill

In addition, knowledge management needs skilled employees. According to SALGA (2013), effective management can assist the Municipality to:

- Improved accountability
- Provide the means whereby Municipalities will be capacitated to achieve their goals, address the needs of their citizens and improve service delivery.
- Make informed decisions.
- Recognise the value of its people and promotes competency.
- Ensure optimal use of the extensive knowledge contained in the municipality.
- Leverage information and knowledge as strategic assets.
- Improving collaboration levels internally and externally.
- Increase collaboration and strategic partnerships with stakeholders.
- Document knowledge of retiring employees.
- Retaining Municipality information

Key enablers for effective knowledge management are (Al-Khouri, 2014):

- Strong leadership is a major enabler which should result in empowerment, decentralisation, and ownership.
- The business culture transformation.
- Customers have to be positioned first and in the centre of all actions.
- Clarity in business vision.

- Openness in operations and unimpeded information flow is required.

In theory local government embraces high-level of knowledge management but on the ground it is still the old command and control practice. This result in local government municipalities implementing knowledge management reluctantly, in spite of the rise of knowledge management and its benefits

3.6 Selected case studies in South African Municipalities

This part discusses knowledge management in the five municipalities in South Africa. The four municipalities are metropolitans and one is a municipality. They are: City of Cape Town, City of Johannesburg, EtheKwini Metropolitan, Buffalo Metropolitan and City of Tshwane. The Stellenbosch Municipality is a municipality, not a metro.

3.6.1 Stellenbosch Municipality

Gaffoor (2014) conducted a study on the Stellenbosch Municipality titled Assessing readiness for the implementation of knowledge management in local governments: The case of Stellenbosch Municipality.

Stellenbosch Local Municipality falls within the Cape Wine lands District Municipality. The municipal area is internationally renowned for its beautiful surrounding, many places of interest, wine farms, street cafes, restaurants, quality wines, historical buildings and excellent educational institutions. The major portion of the area is utilised for agriculture (mainly wine production). Vision: The Creativity Capital of South Africa.

3.6.1.1 Business Culture

Information sharing is departmental though there is a low level of inter department communication. Lack of knowledge management and trust deters information sharing.

3.6.1.2 Human Resources

Here is a strict Humana resources procedure which is adhered to in terms of recruitment. There is an effective human resources improvement through training. There is low staff

turnover which is a knowledge management benefit but some is lost by retirement. The need however to recruit new skilled staff with new knowledge is present.

3.6.1.3 Information Technologies

Stellenbosch Municipality lacks a common integrated information technology system as every department has a department specific system. Systems in use include the South African Municipal Resource Administration System, which is a financial system, Collaborator, which is a document management system and Value Proposition, which is used for property valuations and related information. The municipality also has a database, a website for posting relevant up-to date information. The municipality has adequate information technology infrastructure.

3.6.1.4 Business structure

The municipality has a top-down structure which is bureaucratic and deters horizontal information movement. Skyrme (1999:32) states that the networked business allows for a much quicker response to alterations.

3.6.1.5 Strategy and leadership

Stellenbosch Municipality's IDP is a strategic plan which shows the firm's mission, vision and functions as a road map to illustrate the firm's direction. The Municipality currently lacks a formalised knowledge management strategy. Efforts are on-going to create a knowledge management unit in the municipality's corporate services directorate (Fourie, 2007).

3.6.1.6 Findings and conclusion

Gaffoor notes that there are knowledge management practises in the Stellenbosch Municipality though it is not very clear among senior officials. With some improvements the departments can implement a successful knowledge management strategy. The greatest challenge is interdepartmental knowledge sharing.

3.6.2 EThekweni Metropolitan

The first ever local-government-driven, practitioner-based Municipal Institution of Learning (MILE) was formed in 2009 as a response to calls by the national government. Consultations with stakeholders were done as the initial scoping process

Major successes and priorities for MILE include:

- Improving internal information and knowledge access
- Policy coordination
- Creation of knowledge management culture
- Sharing best practises

3.6.3 Buffalo City Metropolitan Municipality

Political knowledge management champions were first appointed in Buffalo City Metropolitan Municipality (BCCM).there was also knowledge management training for councillors, senior, middle management, and departmental knowledge management champions, in terms of the Knowledge Management Strategy and Framework

The IKM, Research and Policy Department achieved the following:

- The IKM, Research and Policy Department has developed Research Management Policy Framework and Guidelines to govern all research undertaken by, within, or on behalf of BCMM.
- The department has facilitated and coordinated Case Studies of Better or Best Practice, Lessons Learn and Creativity, and continues to do so. Case studies have been undertaken, or are in process, on
 - a. The Public Participation process in the Ward Delimitation process towards becoming a Metropolitan Municipality
 - b. For water Quality the Blue Drop Achievements of BCMM

- c. Govan Mbeki Human Settlement Award-winning projects (both at provincial and national levels); and
 - d. The Basic KM Training provided for councillors at BCMM.
- The IKM, Research and Policy Department has developed Research Management Policy Framework and Guidelines to regulate and govern all research undertaken by, within, or on behalf of BCMM.
 - The department has facilitated and coordinated Case Studies of Better or Best Practice, Lessons Learn and Creativity, and continues to do so. Case studies have been undertaken, or are in process, on:
 - The Public Participation process in the Ward Delimitation process towards becoming a Metropolitan Municipality;
 - The Blue Drop Achievements of BCMM in terms of Water Quality;
 - Govan Mbeki Human Settlement Award-winning projects (both at provincial and national levels); and
 - The Basic KM Training provided for councillors at BCMM.

3.6.4 City of Tshwane

Since the establishment of the knowledge management capability, the following have been achieved

- Approval of the KM Framework and Roadmap
- KM toolkit
- Knowledge zone portal
- Appointment and training of the KM Forum
- Launching of the KM forum

- Coordination of knowledge seminars”

3.6.5 The City of Johannesburg

Joburg Creativity and Knowledge Exchange (JIKE) is the City of Johannesburg knowledge management department. Its responsibilities include:

- Identification, consolidation, structure and dissemination of the City’s strategic knowledge;
- Provision of assistance to key groupings in their decision-making and strategy formulation by providing relevant knowledge;
- Encouraging and facilitation of knowledge sharing across functions, Assistance cooperative governance efforts through sharing and exchanging knowledge;
- Assistance external knowledge sharing initiatives with other municipalities and partners such as South African Cities Network, and the South African Local government Association and
- Identify, nurture and develop creativity within the city in pursuit of better and improved service delivery.”

JIKE has activists, and encourages knowledge sharing through its online portal. Employees are encouraged to submit ideas to improve effectiveness.

Since the inception of JIKE, its success include:

- The creation of methodology for knowledge management
- Documenting dissemination of better practice and lessons through development of case studies on key City initiatives
- The establishment of an empowered knowledge management workers’ (champions’) forum as one of the main tools used by the City to encourage and facilitate knowledge-sharing across functions, departments, municipal entities and external stakeholders

- Efficient knowledge exchange through cooperative governance efforts; and
- Improved documenting sharing of better practice and lessons through development of case studies on key City initiatives. The establishment of an empowered knowledge management workers' (champions') forum as one of the main tools used by the City to encourage and facilitate knowledge-sharing across functions, departments, municipal entities and external stakeholders.

The City's Knowledge Management Strategy informed by the Joburg 2040 GDS seeks to achieve the following:

- Establish and entrench a knowledge culture across the City
- Enhance knowledge generation, storage, dissemination and sharing
- Enhance operational efficiency
- Promote knowledge exchange and business learning

The City of Johannesburg is poised to become a knowledge-based business and intends to ultimately achieve business effectiveness through the use of knowledge management. Through JIKE, it has devised an explicit knowledge management strategy which is derived from the city's 2040 Growth and Development Strategy and the Integrated Development Plan.

3.6.6 City of Cape Town

The City of Cape Town believes that validated information and knowledge are key elements in an effective decision making process. Embedding a knowledge management culture is the second phase of implementing knowledge management, after putting in place the information and knowledge management (IKM) infrastructure. Custodianship is a component of the city's knowledge management policy, meaning that people who are accountable and responsible for information and knowledge assets are present in every department. All departments have a strong knowledge management focus, and each department should appoint a knowledge management officer. Communities of practice, and coaching and mentoring are encouraged.

3.6.6.1 Institutional structure

The Strategic Development Information and GIS department (SDIandGIS) is the knowledge management department and reports to the Executive Director, Corporate Services. The department has three branches: Information and Knowledge Strategy (IKS), Corporate GIS, Knowledge Resources and Assistance (KRandS)

3.6.6.2 IT systems

The City of Cape Town launched Africa's first municipal Open Data portal to share data with the stakeholders in Local government and citizens to increase transparency of its processes as well as promote economic opportunities available.

Table 1: South African Cities' Knowledge Management research summary

City	Challenges	Successes
Stellenbosch Municipality	<ul style="list-style-type: none"> • KM still a distinct and novel idea among senior managers. • No formal KM strategy. • High staff turnover. 	<ul style="list-style-type: none"> • Technology assistances KM. • Sharing culture exists.
Ethekwini Municipality	<ul style="list-style-type: none"> • Business structure doesn't assistance KM 	<ul style="list-style-type: none"> • Improving internal access to information and knowledge. • Policy coordination. • Creating enabling KM business culture. • Sharing creativity and good practice.
Buffalo City Metropolitan Municipality		<ul style="list-style-type: none"> • Appointed political KM champions. • KM training for Councillors, senior managers, middle managers and departmental KM champions. • Established Communities of Practice. • Facilitated and coordinated Case Studies for Best Practices.
City of Tshwane	<ul style="list-style-type: none"> • KM falls under the Research and 	<ul style="list-style-type: none"> • Recognised knowledge as key strategic resource.

	<p>Creativity department.</p> <ul style="list-style-type: none"> • No KM department dedicated to manage and facilitate KM. 	<ul style="list-style-type: none"> • Appointment and training of KM champions • Launched KM Forum. • Approval of KM framework and roadmap.
City of Johannesburg	<ul style="list-style-type: none"> • KM department falls under the office of the Chief Information Officer. • City has no Chief Knowledge Officer 	<ul style="list-style-type: none"> • Has knowledge management department. • Promotion of creativity. • Established a forum of knowledge champions. • Creation of an established KM methodology
City of Cape Town	<ul style="list-style-type: none"> • No KM Officer/s • No KM department • No Chief Knowledge Officer 	<ul style="list-style-type: none"> • All departments have a KM focus • Communities of practice encouraged • Custodianship is the component of the City's KM policy • Knowledge assets present in every department • Technology assistances KM. • Launched Open Data Portal to share data with citizens

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

The chapter seeks to highlight in detail the research method used by the researcher. The research was descriptive in nature combining qualitative and quantitative research methodologies with the objective of giving the research more strength and scrupulous accuracy. The research focused on a general idea which is fairly new to South Africa's local government and took the Johannesburg Metropolitan Council as a case study.

4.2 Method of Study

The researcher does have wide range of options when conducting a research, one can make use of the qualitative research methodology independent of the quantitative research methodology or vice versa; while on the other hand one can simultaneously use both methodology during the course of the research. Creswell (2003) highlighted that, combining qualitative and quantitative research methodologies is best for academic research studies as it allows for a wide range of data collection tools as well as effective data analysis and presentation. The researcher used the mixed approach methodology combining qualitative and quantitative research methodologies so as to mitigate the weaknesses of the two approaches as the strength of one approach covered for the weaknesses of the other and vice versa. The forgone also allows effective data collection, data analysis and data presentation.

4.3 Research design

This part is critical for demonstrating that the researcher has developed a clear and organised study design (Kothari, 1990 and AHRQ, 2005). Babbie, Mouton, Vorster and Prozesky (2006:72) defined research design "as a detailed plan about what needs to be observed and analysed, why and how." The researcher has selected the mixed method approach.

4.3.1 Triangulation

Triangulation sometimes referred to as the mixed method approach method combines qualitative and quantitative research methodologies. Kelly (2006) noted that, triangulation is the collection of data using various data gathering tools from diverse sources with the objective of assisting the researcher's level of understanding. The researcher adopted triangulation (mixed approach method) during the course of the study so as to obtain suitable data as well as pertinent findings. Triangulation was achieved by using both a survey under senior management and then checking the results in a follow-up interview with the person responsible for knowledge management in the organisation.

4.3.2 Qualitative and Quantitative methods

4.3.2.1 Quantitative research

The quantitative part of the research employed a survey method to get information on knowledge management practices in the City of Johannesburg. Neuman (2006) is of the view that, quantitative research systematically deals with the use of the same questions on different respondents, recording their response in the process. Questionnaires that were sent to the participants (directors at the City of Johannesburg) had the same questions in the same order.

4.3.2.2 Qualitative research

Strauss and Corbin (1990) postulated that, qualitative research is does not make cognisance of statistics or quantifications when it comes to its research findings. Anderson and Arsenault (1998) alluded that, qualitative research explores events naturally using multi-disciplinary methods such as interpretations, explanations and derive mean from them. The qualitative research methodology does give room for an in-depth inquiry on a number of issues paying particular attention to context and details. The forgone therefore supports depth and transparency on the gathered data. In this thesis the qualitative research approach methodology allowed respondents to freely air out their views as well as their level of understanding with regards to KM practices in the City of Johannesburg. The researcher conducted interviews with the director of KM [content expert] in the City of Johannesburg.

4.3.3 Case Study

The City of Johannesburg metropolitan council was selected as a case study. The case study was suitable for this research due to the fact that knowledge management is still a new phenomenon in the local government. Leedy and Ormrod (2005) revealed that, a case study is used for the purposes investigations where a researcher utilises more in-depth methods in answering exploratory questions and provide interpretive outcomes. Also this is the first in-depth KM study in the City of Johannesburg. The study of knowledge management practices in the City of Johannesburg had to be done within a certain period of time, and not indefinitely hence the case study approach was appropriate because it allowed an in-depth investigation of partial event in the shortest space of time.

4.4 Sampling and Selection

The first sampling frame consisted of all the managers above a certain level as potential survey respondents while the second selection comprised of a participant who was interviewed as a content expert. There are two sampling procedure used widely used in research studies namely probability sampling and non-probability sampling. Denscombe (2007) noted that, probability sampling involves the selection of participants or events literally at random. The researcher used both sampling techniques (probability and non-probability) for the purpose of this study.

According to Ramohlale (2014), the non-probability sampling technique depends on judgment selection of representative and typical elements. The following are types of non-probability sampling techniques; accidental sampling, purposive sampling and quota sampling. The researcher has used the purposive sampling.

The directors were selected through the use of the purposive sampling techniques. The researcher during the course of research carried out a one on one interview with the content expert, who is the director of a knowledge management department in the City of Johannesburg. He was selected to give an inestimable introspection and more detailed response to the questions that arose from the survey questionnaire.

4.4.1 Population

Saunders et al (2007) revealed that, a population is every possible case that could be included in a study. For the purpose of this thesis, the City of Johannesburg municipal council employees were selected as the population. A population is “the entire group of people that the researcher desires to learn about” (Stangor, 2011). However, the researcher did not comprehend the entire population, because it was too large. The target group for the research study were directors in the City of Johannesburg metropolitan council. The decision to restrict the study to directors at the City of Johannesburg metropolitan council was based on the belief that senior managers have more influence over knowledge management practices in the organization. It was also felt that senior managers are best placed to give a picture of the status of knowledge management in their departments.

4.5 Data Collection Procedures

The data gathering procedures and data gathering tools used in this study are explained in detail. Voce (2005) articulated that, data gathering method is a systematic approach, techniques, and tools used in data collection. Du Plooy (2002) said that, data collection is concerned with who, what, how and where data was collected.

This research adopted the triangulation methodology with the aim of having an in-depth validated study (Johnson and Christensen 2004). The mixed approach method is followed in collecting data from the participants aimed at supporting data and mitigates bias (Cox, 2008). Case research studies use various methods to collect data. Myers and Avison (2003) noted that, the researchers should come up with a reach action plan pertaining to the type of data they wish to collect. Data collected to this effect should be plausible and valid. To certain the integrity of data, authentic data collection instruments such as interviews, questionnaire and document analysis initiated during the research study.

A benefit of using the mixed method in a study is that the contrasting measuring instruments complement each other. When the researcher uses multiple methods, where he or she combines various methods and investigations in the identical study, it surmounts the shortcomings emanating from a research design method (Babbie et al., 2006).

Questionnaires as well as interviews were used to deduce data validating the underlying principle of the role of knowledge management in improving organisational deeds, resulting in triangulation (Rowley, 2003). Triangulation sometimes referred to as the mixed method approach method combines qualitative and quantitative research methodologies. Data was collected for the purpose of this research was from both primary and secondary sources. Primary data included survey and face-to-face interview with the content expert at the metropolitan council worthwhile to seek and probe the research findings. Publications and company documents were covered by secondary data sources.

4.5.1 Questionnaire

The questionnaire was distributed electronically to the directors in the City of Johannesburg metropolitan municipal council. The objective of the research study was clearly explained in the survey questionnaire. The questionnaires were circulated during the month of August 2017 to the first week of September 2017.

The respondents were assured of confidentiality hence were not asked to provide their demographic information in the survey questionnaire. The shortcoming of the above was that, when the researcher made follow ups to encourage other directors to complete the survey, the email also went to the directors who had already completed the survey. The researcher had to explain the reason for that to the affected respondents.

4.5.2 Questionnaire Design

The questionnaire was designed with the assistance of Daan Botha's (2005) questionnaire, titled SA Knowledge Management Survey. The questionnaire (see Appendix A) has seven parts and twenty-five questions. The questionnaire is in a form of a statement. Respondents used a scale (1-6) to respond to each statement.

The questionnaire is divided into the following parts:

- Guidelines about filling out the assessment
- Leadership
- Culture

- Structure
- Processes
- Technology
- Measures

Part One (Q1) is a guideline about filling out the questionnaire. The questionnaire is in a form of a statement. When filling the survey questionnaire, respondents used a scale. The following score scale (1 -6) was used and a respondent had to choose a level for each statement about the organization:

1 – No taking place at all

2 – Aware of this practice

3 – Considering implementation

4 – Recently implemented

5 – Mature implementation

6 – Embedded throughout the firm

Section Two (Q2 – Q4) is about Leadership. This part gathers data about the firm's vision, strategy and if the firm is a learning business.

Section Three (Q5 – Q10) is about Culture. It collects data about business's communication, customer orientation, collaboration, workplace, and knowledge sharing and knowledge contribution.

Section Four (Q11 - 15) is about Structure. The part collects data about business's teams and groups, knowledge management roles, management communication, incentive systems and external structures.

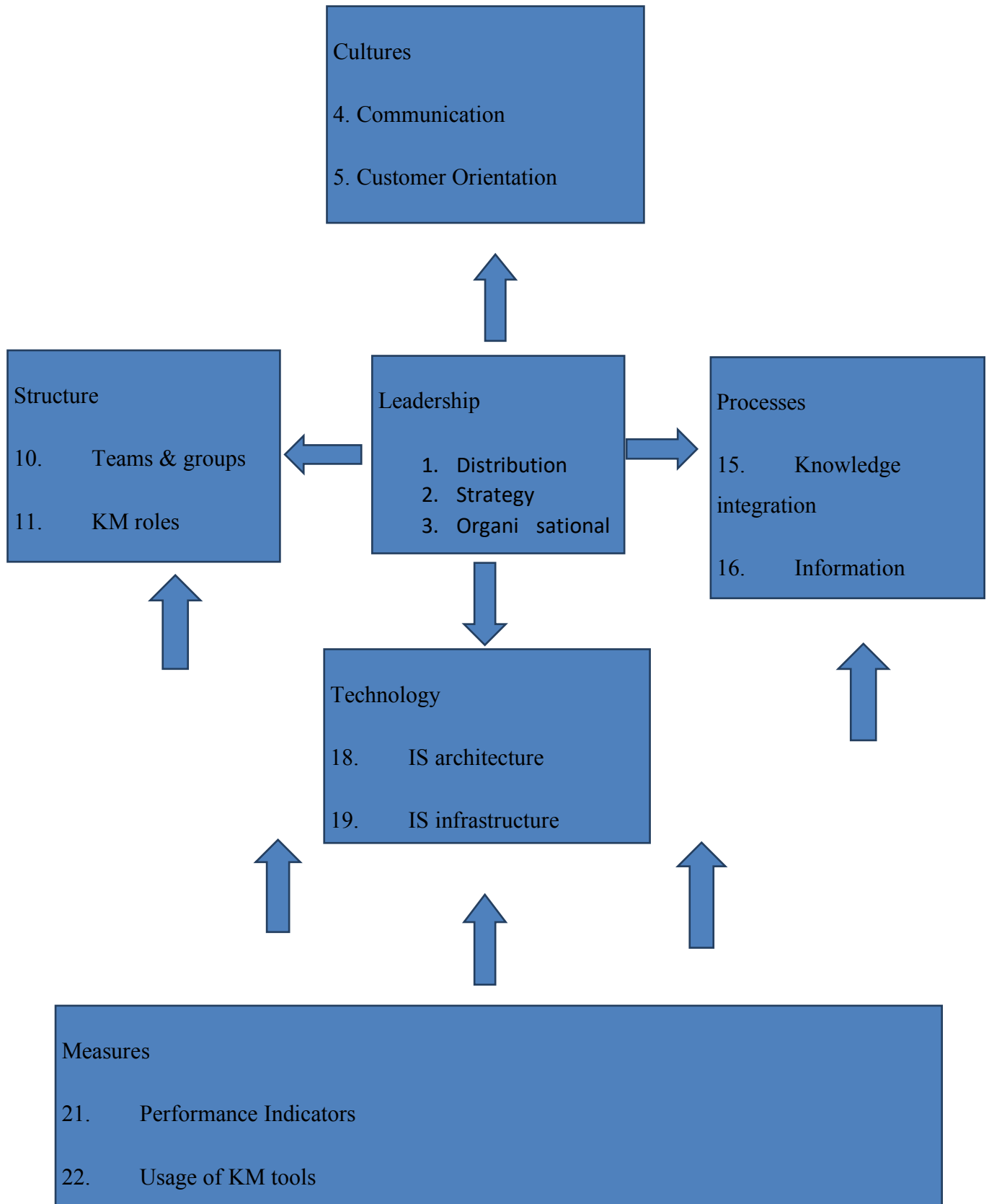
Section Five (Q16 – Q18) is about Processes. It collects data about business's knowledge integration, information management and business intelligence.

Section Six (Q19 – Q21) is about Technology. This part gathers data about information system architecture, information technology infrastructure and knowledge management application software.

Section Seven (Q22 – Q25) is about Measures. It collects data about performance indicators, usage of knowledge management tools, knowledge management progress report and alignment.

The model on which the questionnaire is based can be seen in the next figure:

Figure 1: Business Knowledge Management Assessment Model (Botha, 2005)



4.5.3 Collection of Questionnaires

Questionnaires was hosted online and invitations were distributed to the respondents (City of Johannesburg directors) by email.

4.5.4 Interview

In any research project, interviews are significant and afford the researcher an opportunity to dig deeper in order to collect data which might not have been attained using other instruments (Cunningham, 1993). Face to face interview sessions were conducted by visiting the director's workplace. The researcher conducted an interview with the content expert in the Johannesburg metropolitan council. This took a form of an unstructured interview with the purpose of verification and clarification of issues that have risen in answering the survey questionnaire.

4.5.5 Document Analysis

Hurworth (2005) postulated that, document analysis is obligatory to inform various types of evaluation. Evaluator bias is mitigated in the production of data attained from document analysis, as compared to other forms of data (Ramohlale, 2014). The researcher has consulted business's documents to collect data. Documents scrutinised by the researcher were Johannesburg 2040: Development and Strategy Growth, City of Johannesburg Case Studies 2011- 2012, COJ Enterprise Knowledge Management Strategy 2010 – 2011, and Engagement with M and T Team: Creativity and Knowledge Management Unit 27 July 2017.

4.5.6 Instrumentation and measurement

The main reason for this research is to inquire about the knowledge management practices in the City of Johannesburg. An instrument used in the survey to measure the variables was a knowledge management questionnaire developed and validated by Botha (2005) from the University of Stellenbosch. The instrument used is outlined in Table 2.

Table 2: Instrumentation and measurement of variables

Concept	Original author	Subscales	Number of items
KM	Botha (2005)	Guidelines	1
		Business Culture	6
		Leadership	3
		Information Technology	3
		Processes	3
		Structure	4
		Measures	4
Total number of items used			25

The same questions were asked to all the respondents. The questionnaire was hosted online at a recognised online survey platform, namely QuestionPro. Senior managers at the City of Johannesburg were invited to participate via email linking to the survey, the informed consent, institutional permission, and ethical clearance documentation.

As a follow-up to the survey data (in the light of the fact that responses were insufficient to report more than frequencies) the director of knowledge management was interviewed to compliment the online survey.

The survey instrument used and the reference model it is based on (Botha and Fouché, 2002) were already validated (see Botha 2005), so the challenge was to ensure sufficient responses.

The study used a mixed method approach to increase the reliability and validity by triangulating the survey responses with the follow-up interview.

4.7 Ethical Consideration

The research was done with the permission from the Stellenbosch University Research Ethics Committee. The researcher also signed the ethical code of the University of Stellenbosch and adhered to the university's ethical guidelines.

A permission letter to carry out the study was sent to the top managerial office of the City of Johannesburg and the research ethics clearance process at Stellenbosch University was followed. The research commenced only after institutional permission was obtained from top management and ethics clearance was received from Stellenbosch University. The respondents were provided with the research ethics clearance and institutional permission letters, as well as an informed consent agreement prior to their participation according to which they had the right not to participate, or to withdraw their participation at any stage. In addition, they were assured that the data was collected only for academic research purposes. It was explained that their responses were anonymous by design and that data will only be reported in an aggregate form.

4.8 Data Analysis

Qualitative and quantitative data analyses were employed since the research utilised mixed approach to data collection.

Since the survey instrument used was designed to provide a profile of the organisation on indicators grouped into a few constructs, the frequencies for each indicator were represented in bar charts. Taken together these display a particular profile of the knowledge management practices at the case organization.

However, the profile that emerged could not be interpreted without reference to the information from the interview with the director of the knowledge management programme. The interview data explained some of what was seen in the profile constructed with the survey responses, since the interview was based on the profile; and the interpretation of the interview in turn augmented by the profile.

4.9 Limitations of the study

Every study has its own limitations, below are the limitations of this study

- This study was confined to one (out of 278 municipalities) local government municipality for instance. The City of Johannesburg. The one case study revealed that there is a possibility that the research findings might not be generalizable outside the researched business without carrying out any further study. This is exacerbated by the

fact that the City of Johannesburg is the largest municipality in the country. However the assumption is that it is representative of metropolitan councils.

- Only senior managers participated in the research study, therefore the sentiments were one-sided. The researcher did not include the lower ranking management as well as the non-managerial employees. The assumption is of course that senior managers' perceptions carry more weight and that they have a better overview of their departments than the rank-and-file. For many research problems this is not the case, but in this case it was felt that many items of the survey instrument required judgement about information that can be assumed only at higher levels of management.
- There is a possibility that participants will not return the questionnaires and for those who would honour up they may not do so in time. Hence the number of respondents returning the questionnaire is likely to be less than the number of questionnaires distributed. Because of the timing of data gathering (during a period of upheaval and transition), this proved to be a big problem.
- The use of electronic methods in delivering the questionnaires may have led to technical problems, although a reputable platform was used, namely QuestionPro.

CHAPTER 5: RESEARCH FINDINGS AND DATA ANALYSIS

5.1 Introduction

The previous chapter discussed the research design and methodology used in this study. The study employed the mixed method in which the qualitative and quantitative research methodologies were used in the data collection procedures. The quantitative approach involved the administration of a questionnaire, whilst the qualitative methods included document/s reviews and interview. The purpose of this chapter is to describe and analyse the data gathered during the course of the research study. The research findings will also be discussed in this chapter. Chapter five presents the research findings from the survey, data analysis and the discussion of findings. Data analysis usually follows data collection. The main themes presented in the interviews and the questionnaires will determine the structure to be used in data analyse.

There are 904 directors in the City of Johannesburg: 146 Directors; 335 Deputy Directors and 423 Assistant Directors.

Table 3: City of Johannesburg Directors

Designation	Number
Directors	146
Deputy Directors	335
Assistant Directors	423
Total	904

Of course, the researcher did not get access to the entire distribution list of managers and had to use a list composed of Deputy and Assistant Directors from which 234 invitations were distributed to complete the questionnaire [Appendix A], but only 56 completed responses were received, representing a 23.93 % of the response rate. The researcher made a follow up interview [Appendix B] with the higher-level managerial office of the knowledge management

department in the City of Johannesburg to compensate for the large error rate likely given the low response rate.

The municipality has nine directorates comprising various sub-departments. The directorates are: Customer Relations and Urban Management, Public Safety, Group Finance, Community Development, Corporate Service, Health, Transport, Economic Development and Housing. The focus of the study was in all the directorates.

Table 4: City of Johannesburg Directorates

Directorates
Public Health
Group Finance
Community Development
Corporate Service
Health
Transport
Economic Development
Housing
Safety
Corporate Service
Economic Development
CRUM

The demographic profiles (names, gender, race, age, education level, work experience and so on) of the respondents were not conducted. This was done to encourage participation in the

survey – but the participation remained low anyway. The questionnaire was circulated amongst the directors, deputy directors and assistant directors.

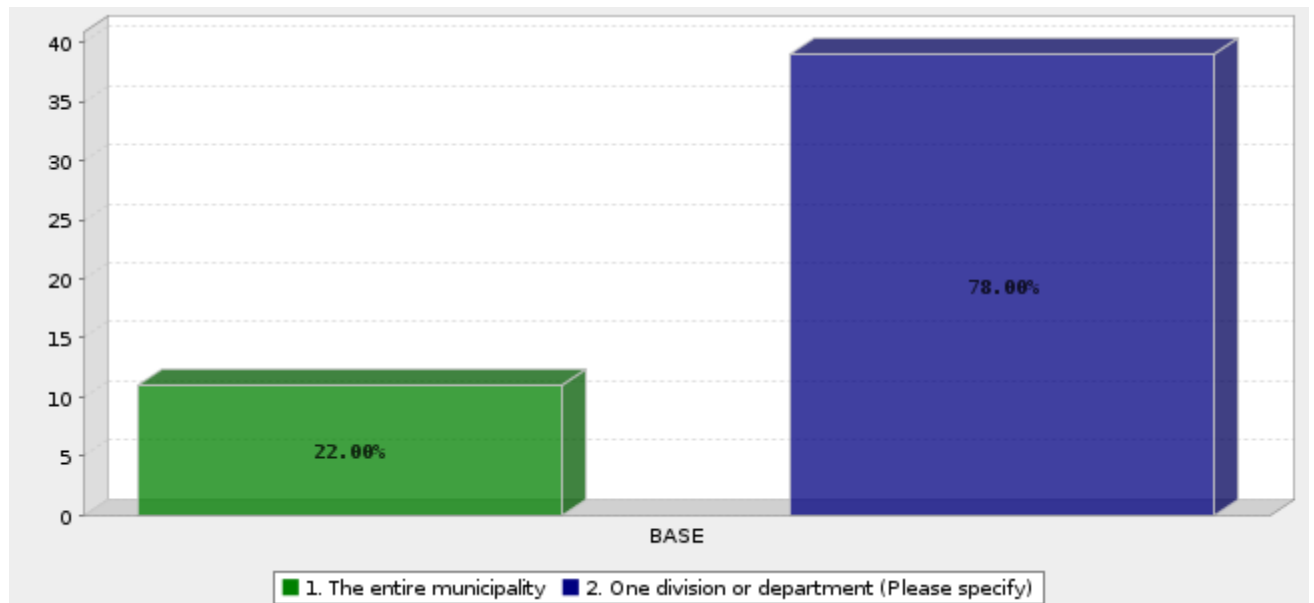


Figure 2: Response - Entire municipality of division

At the beginning, respondents were asked if they were responding on behalf of the entire business or on behalf of their Divisions. 11 (22%) said they were responding on behalf of the entire organisation, while 39 (78%) responded on behalf of their particular section or unit.

The themes that were considered for this study were:

- Business Culture
- Leadership
- Information Technology
- Processes
- Structure
- Measures

The reporting of the data analysis collected from the questionnaire is separately covered from the data gathered from the interview.

5.2 Presentation and Analysis of Research Findings

In this part we analyse the data obtained from the survey questionnaire. The assessment items are in a statement format. The questionnaire had 25 statements. The objective was to evaluate the statement and allocate one score for each statement. Respondents used a scoring scale of 1-6 to respond to the statement as indicated below:

- 1- Not taking place at all
- 2- Awareness exists
- 3- Implementation considered
- 4- Recently implemented
- 5- Mature implemented
- 6- Embedded throughout the firm

5.2.1 Leadership

5.2.1.1 Vision

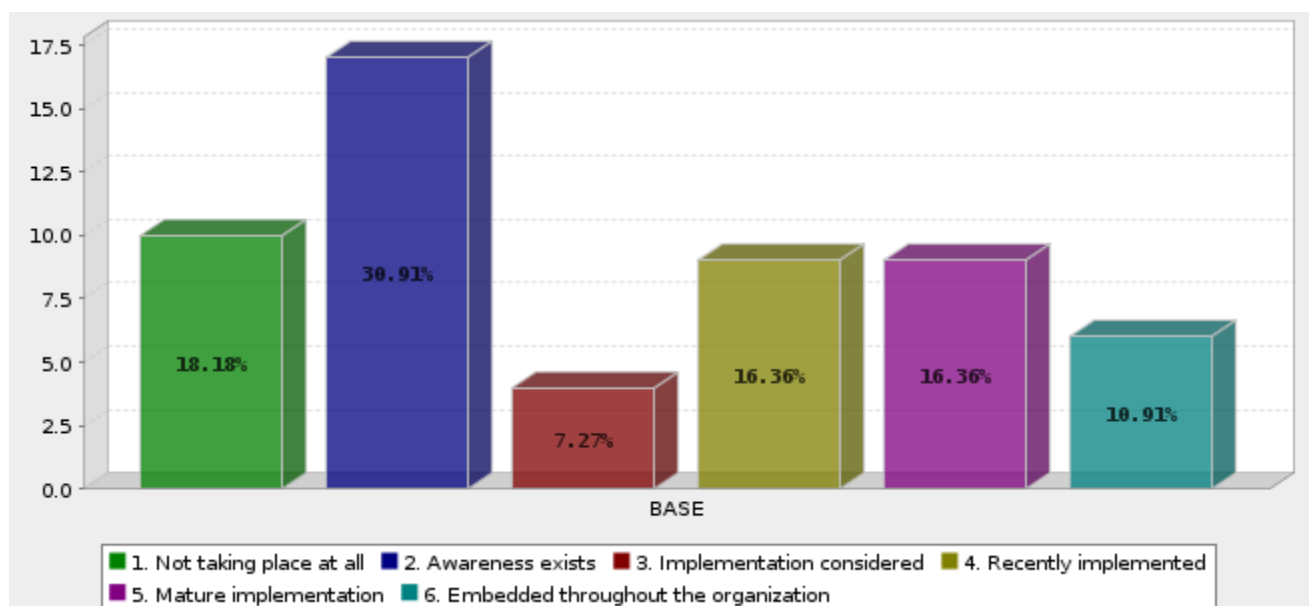


Figure 3: Response - Vision

The statement sought the views of the respondents about the firm's vision on knowledge management. The researcher wanted to find out if the firm has an insight on the critical importance of awareness for the achievement of its objectives and if the vision is clearly articulated and mutually shared by all members. Figure 3 summarises the responses of the respondents to the statement.

The views of the respondents differed. 10 (18.18%) disagree with the statement, saying it is not taking place at all. The majority of respondents 17 (30.91%) said awareness exists. The minority of respondents 4 (7.27%) said implementation is being considered. 9 (16.36%) of respondents said it has been recently implemented; an equal number of respondents 9 (16.36%) said there is a mature implementation. 10. 91% said it is embedded throughout the firm.

5.2.1.2 Strategy

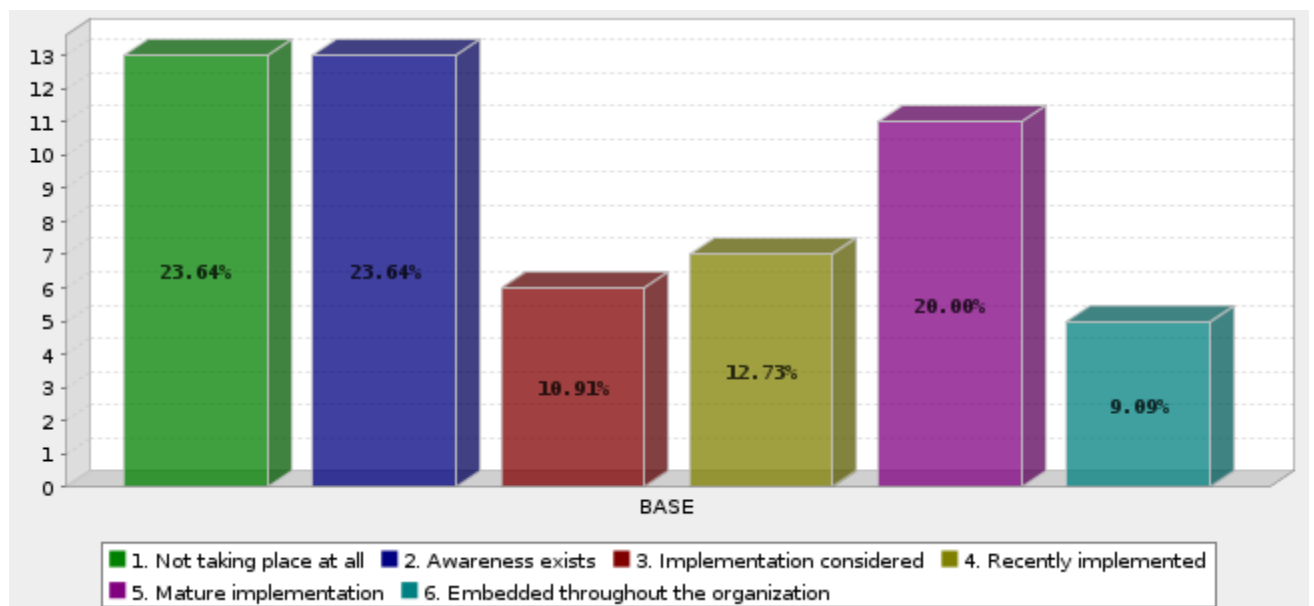


Figure 4: Response - Strategy

The statement sought the views of the respondents about the firm's strategy on knowledge. The researcher wanted to find out if the firm has implemented a strategy to create and apply knowledge that aligns with the operational objectives of enhancing customer value - and

whether the knowledge strategy has been clearly and purposely communicated to all levels. Figure 4 summarises the responses.

13 (23.64%) of respondents agreed with the statement, equally 13 (23.64%) disagreed with the statement. 6 (10.91%) of respondents affirmed that the strategy implementation is being considered, whilst 7 (12.73%) said the strategy has been recently implemented. 11 (20.00%) added that there is a mature implementation, the minority of respondents 5 (9.09%) said it is embedded throughout the firm.

5.2.1.3 Business Learning

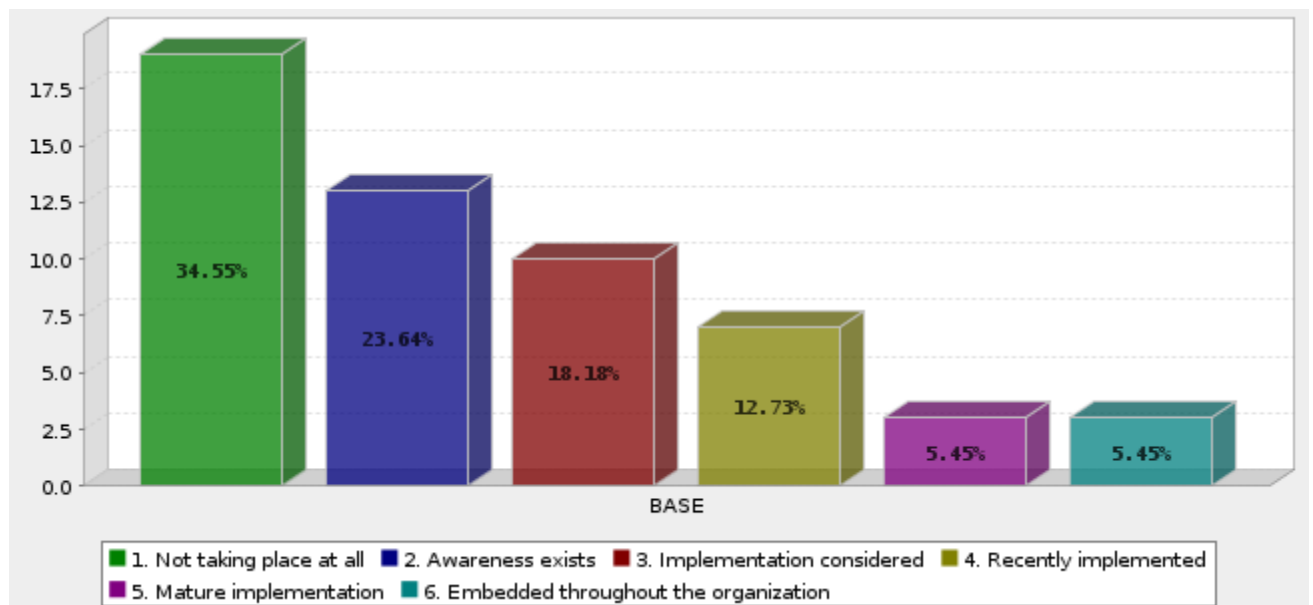


Figure 5: Response - Business Learning

The statement sought the views of the respondents about the firm's learning on knowledge. The researcher wanted to know if there is an advantage to be gained from exploiting customer, supplier, distributor, alliance and partner knowledge, and that it is well understood throughout the firm - and if the learning objectives with respect to this knowledge are jointly set and actively pursued. Figure 5 summarises the responses.

The larger pool of the participants 19 (34.55%) refuted the motion, saying business learning is not taking place at all. The second majority of respondents 13 (23.64%) said awareness exist. 10 (18.18%) said implementation is being considered, whilst 7 (12.73%) said it has been

recently implemented. 3 (5.45%) believes there is mature implementation, equally 3 (5.45%) said it is embedded throughout the firm.

5.2.2 Culture

5.2.2.1 Communication

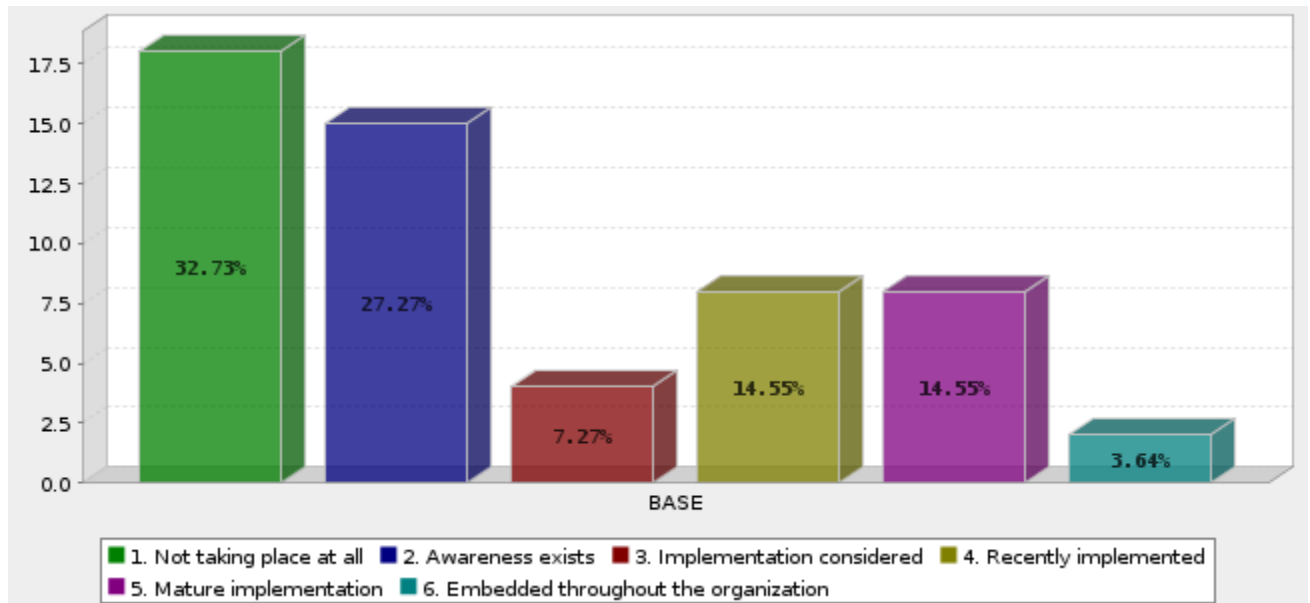


Figure 6: Response - Communication

The statement sought the views of the respondents about communication. The researcher wanted to know if knowledge and information communication across business boundaries is intense, open, wide spread and free flowing, and underscored by mutual trust, understanding and respect. Figure 6 summarises the responses.

The majority of respondents 18 (32.73%) disagreed with the statement, saying it is not taking place at all. The second majority of respondents 15 (27.27%) said awareness exists. 4 (7.27%) said implementation is being considered. 8 (14.55%) said it has been recently implemented, equally 8 (14.55%) said there is mature implementation. The minority (3.64%) said it is embedded throughout the firm.

5.2.2.2 Customer Orientation

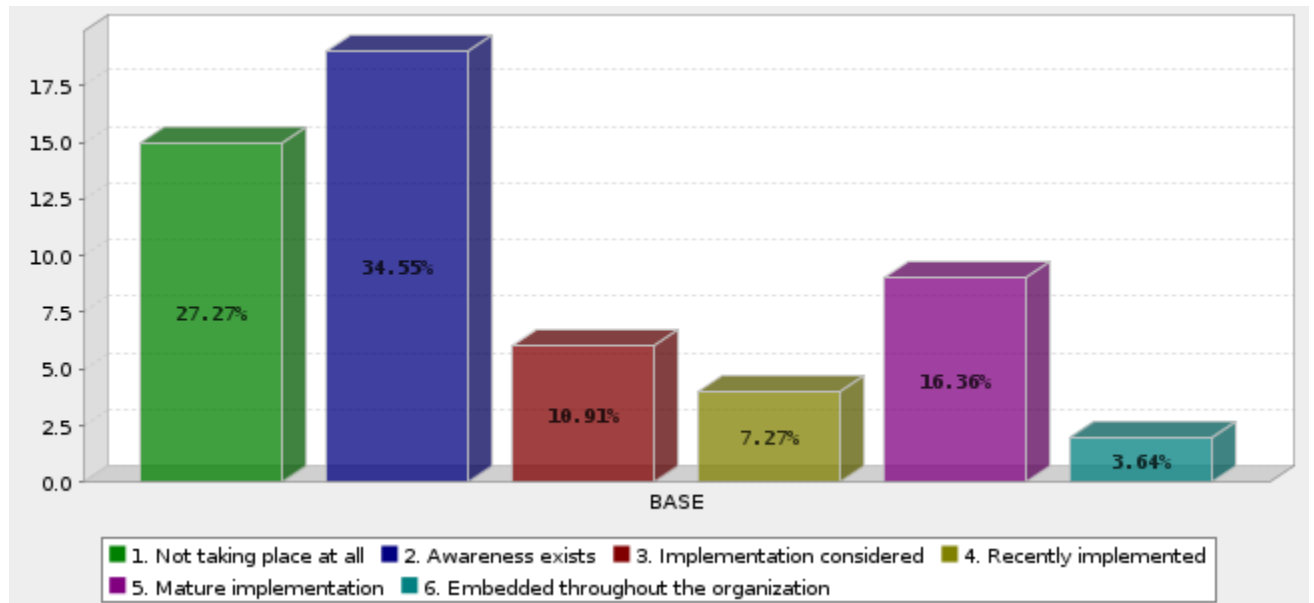


Figure 7: Response - Customer Orientation

The statement sought the views of the respondents about the firm using knowledge to improve customer service. The researcher wanted to find out from respondents if all members share a deep sense of commitment to continually apply business knowledge to get customer service, customer problems solving and customer value creation - and if sharing customer experiences with others in the firm and the value chain has become part of the daily routine. Figure 7 summarises the responses.

The respondents shared different views on the statement. 15 (27.27%) responded negatively, saying knowledge is not being used to improve customer service. The statement received assistance from the majority of respondents 19 (34.55%), saying awareness exists. 6 (10.91%) said implementation is considered. 4 (7.27%) added that it has been recently implemented, whilst 9 (16.369%) said there is a mature implementation. The minority 2 (3.64%) said it is embedded throughout the firm.

5.2.2.3 Collaborative Relationships

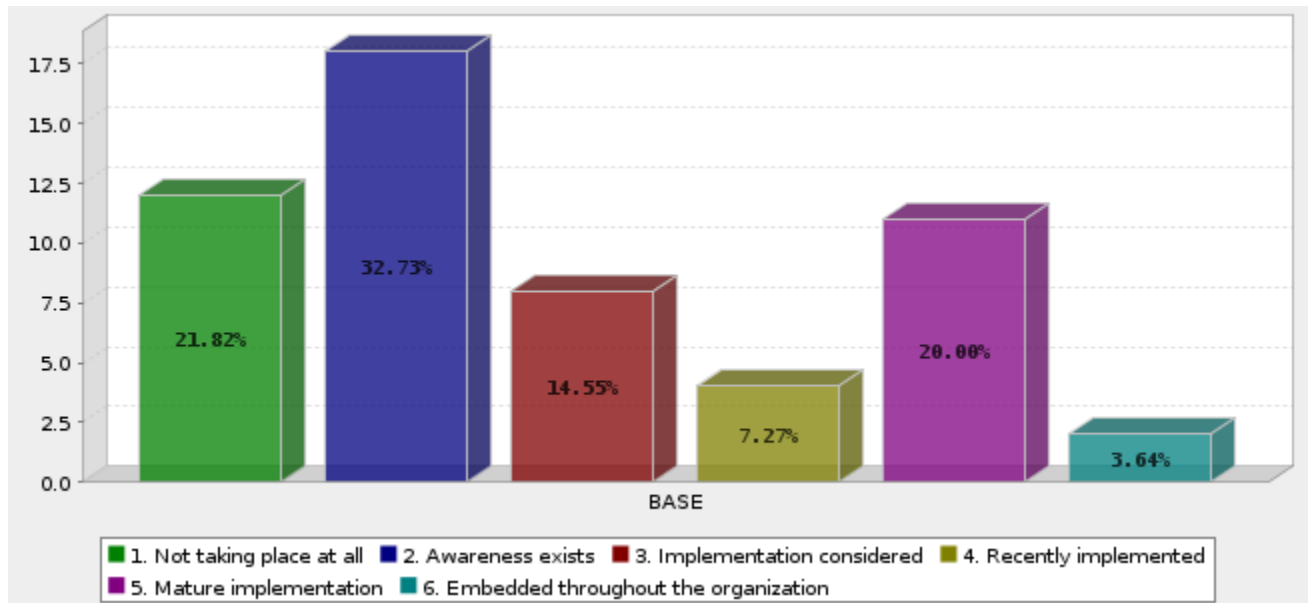


Figure 8: Response - Collaborative Relationships

The statement sought the views of the respondents about collaborative relationships. The researcher wanted to find out if collaborative relationships exist in the form of alliances, joint ventures, partnerships and other members of the value chain are constantly used by business employees to create customer value. Further if joint knowledge development, creativity, and knowledge sharing are standard practice in these relationships. Figure 8 summarises the responses.

The views of the respondents differed sharply on collaborative relationships. 12 (21.82%) of respondents disagreed with the statement, saying collaborative relationships are not taking place at all. The statement received assistance from the majority of respondents 18 (32.73%), saying awareness exists on collaborative relationships. 8 (14.55%) affirmed that implementation is being considered. 4 (7.27%) said it has been recently implemented, whilst 11 (20.00%) said there is mature implementation. The statement received less assistance 2 (3.64%), saying collaborative relationships are not embedded throughout the firm.

5.2.2.4 Physical Work Surrounding

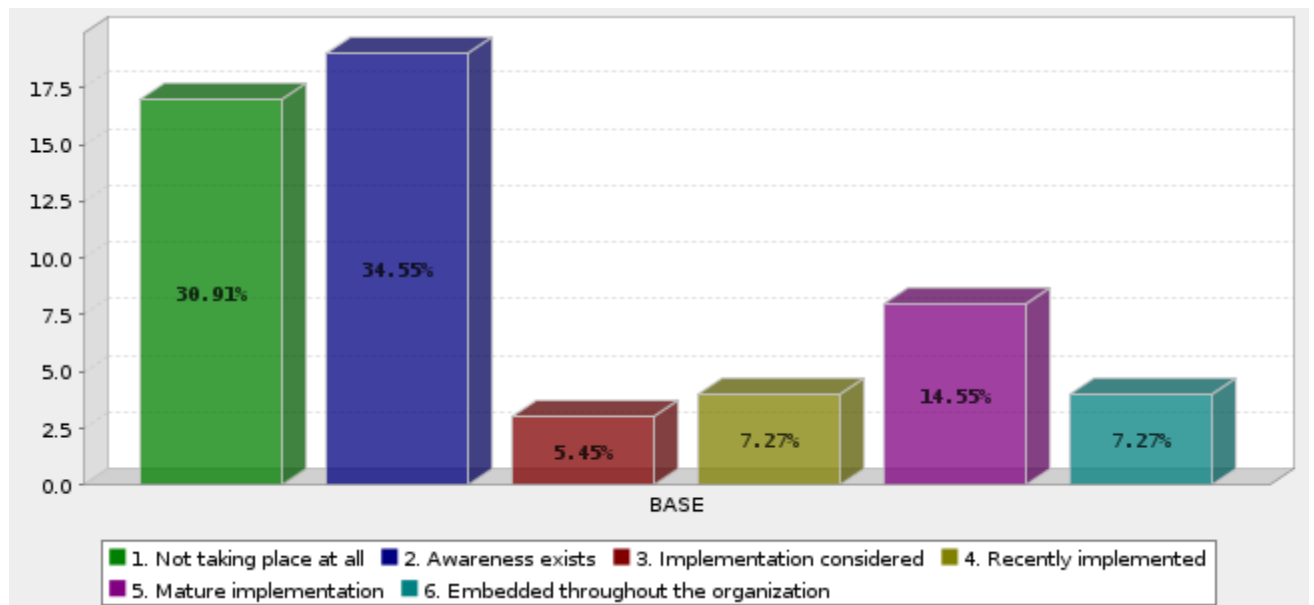


Figure 9: Response - Physical Work Surrounding

The statement sought the views of the respondents about physical work surrounding. The researcher asked if management openly assistances and encourages the following practice: The value of using the physical work surrounding (open areas, co-located offices and informal meeting places) to promote knowledge sharing and information exchange are fully realised by all members of the firm. Figure 9 summarises the responses.

17 (30.91%) opposed the statement, saying it is not taking place at all. On the other hand, the majority assistanced the statement 19 (34.55%), saying awareness exists. The minority of respondents 3 (5.45%) said implementation is being considered. 4 (7.27%) said it has been recently implemented, whilst 8 (14.55%) said there is mature implementation. 4 (7.27%) said it is embedded throughout the firm.

5.2.2.5 Knowledge Sharing

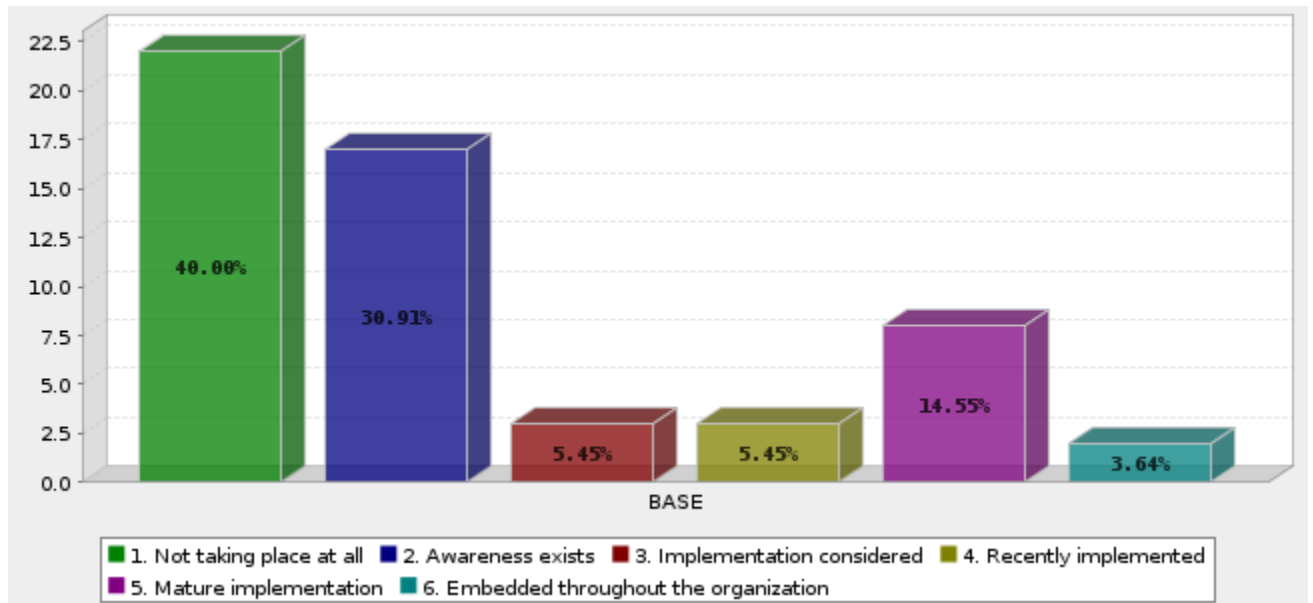


Figure 10: Response - Knowledge Sharing

The statement sought views from respondents about knowledge sharing in the institution. The researcher wanted to know if a natural awareness of the mutual benefits of sharing knowledge is instilled in all members of the firm and has become a way of life - and if management recognises knowledge sharing and knowledge creation efforts and firmly discourages knowledge and information hoarding. Figure 10 summarises the responses.

The majority of respondents 22 (40.00%) opposed the statement, saying knowledge sharing is not taking place at all. On the other hand, 17 (30.91%) assisted the statement, saying awareness exists on knowledge sharing. 3 (5.45%) said implementation is being considered, equally 3 (5.45%) said knowledge sharing has been recently implemented. 8 (14.55%) affirmed that there is mature implementations. The minority 2 (3.64%) said knowledge sharing is embedded throughout the firm.

5.2.2.6 Knowledge Contribution

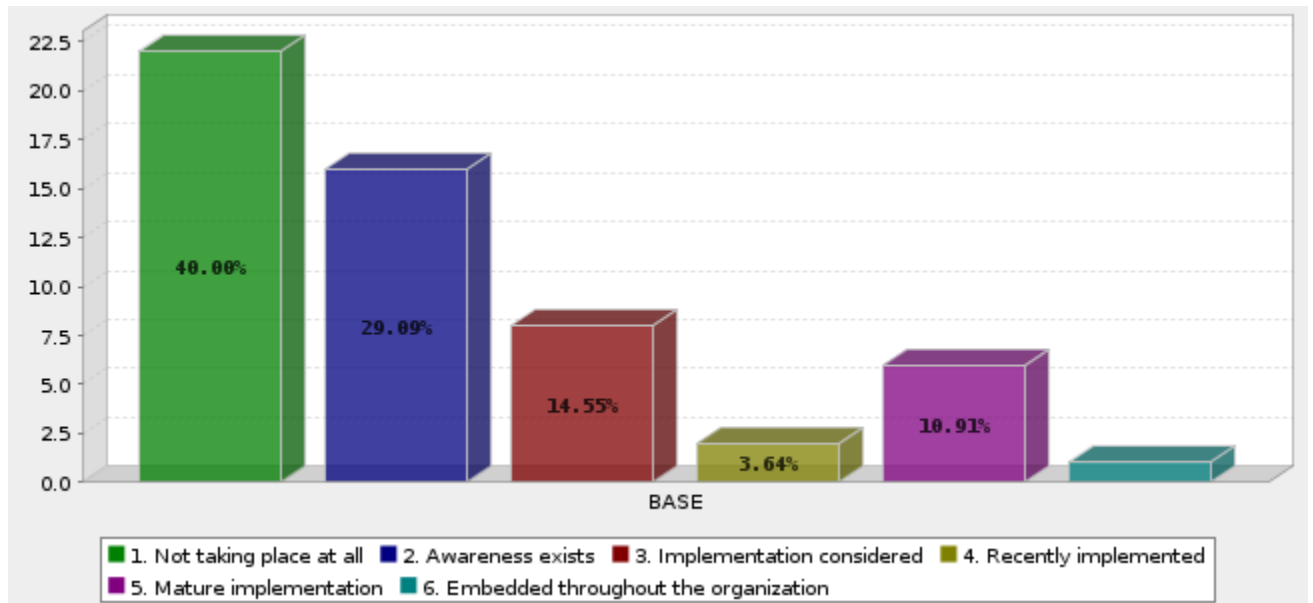


Figure 11: Response - Knowledge Contribution

The statement sought the views of the respondents on knowledge contribution. The researcher wanted to know if there is a culture of voluntary contributions to the firm's knowledge-base is widely entrenched amongst all members, teams and groups – and if the utilisation of the knowledge base is likewise well engrained as standard operating procedure. Figure 11 summarises the responses.

The views of the respondents differed on knowledge contribution. The majority of respondents 22 (40.00%) opposed the statement, saying knowledge contribution is not taking place at all. The second majority 16 (29.09%) assisted the statement, saying awareness exists on knowledge contribution. 8 (14.55%) said implementation is being considered, whilst 2 (3.64%) said it has been recently implemented. Whilst 6 (10.91%) said there is mature implementations. The minority of respondents 1 (1.82%) said knowledge contribution is embedded throughout the firm.

5.2.3 Structure

5.2.3.1 Teams and Groups

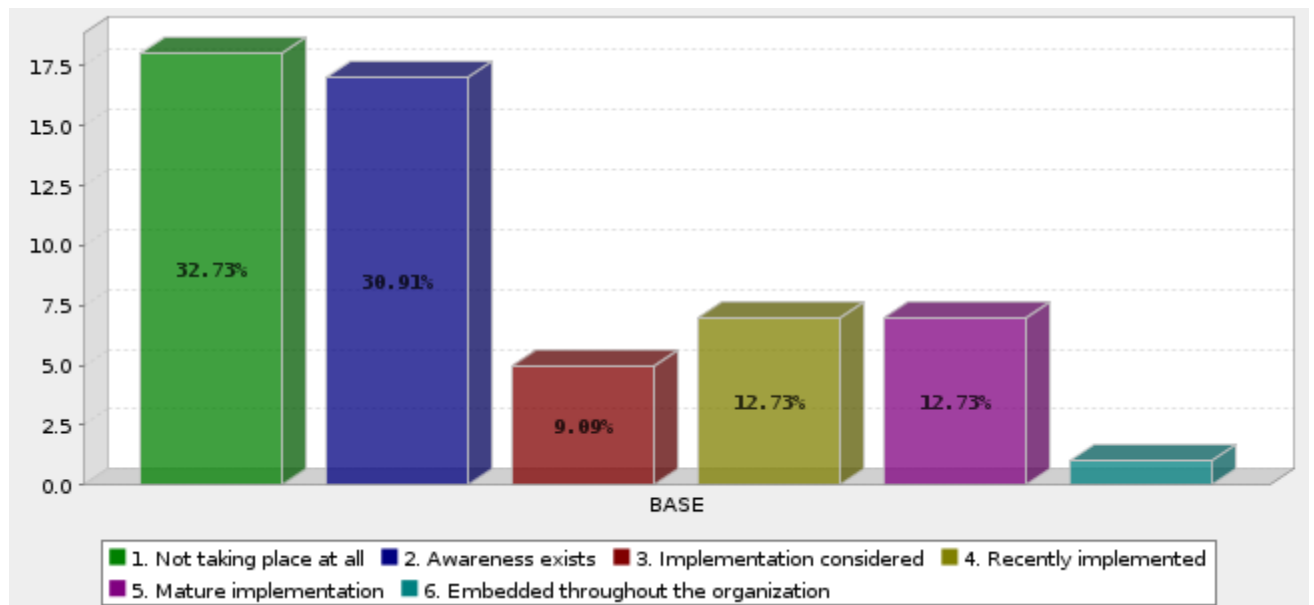


Figure 12: Response - Teams and Groups

The statement sought the views of the respondents about teams and groups in the firm. It is standard practice for the firm to staff project teams, task forces and workgroups with multi-disciplinary and cross-functional members in order to exploit all the embodied knowledge. The researcher wanted to know if there is opportunity to involve value chain members in these teams and, is likewise exploited. Figure 12 summarises the responses.

The majority of respondents 18 (32.73%) said it is not taking place at all, whilst the second majority of respondents 17 (30.91%) said awareness exists. 5 (9.09%) said implementation is being considered. 7 (12.73%) said it has been recently implemented, equally 7 (12.73%) said there is mature implementations. The minority of respondents 1 (1.82%) asserted that it is embedded throughout the firm.

5.2.3.2 KM Roles

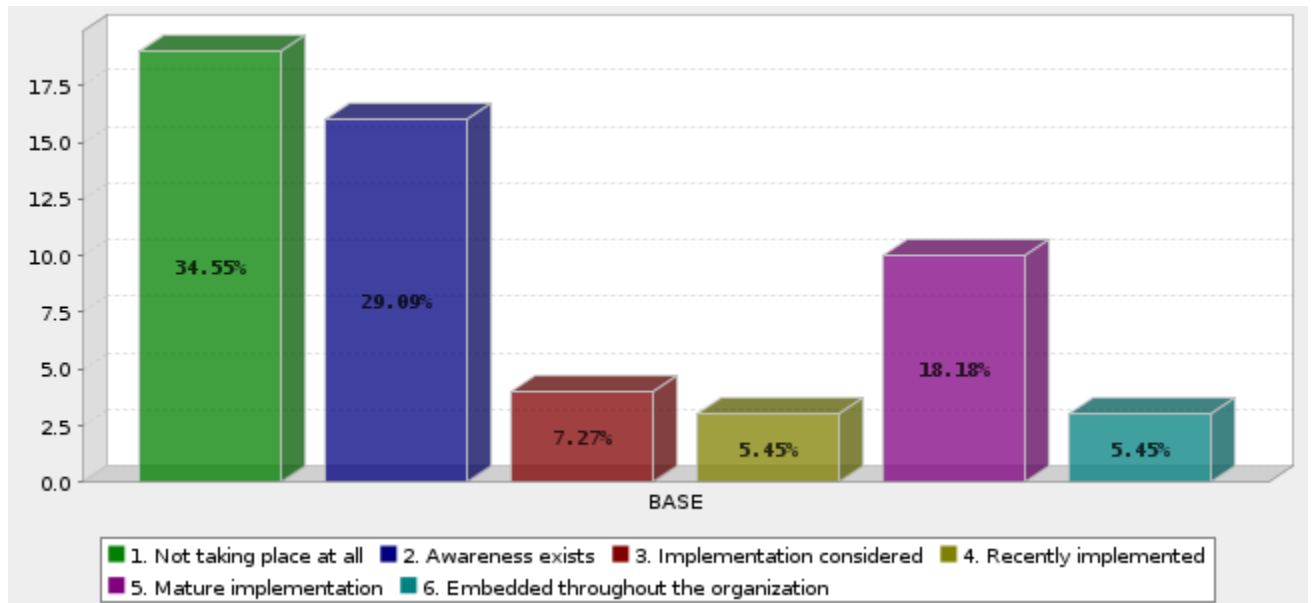


Figure 13: Response - KM Roles

The statement sought the views of the respondents about knowledge management roles in the firm. The researcher wanted to find out if explicit knowledge management roles are defined, appointments made and duties allocated – and if leaders in operational entities accept responsibility to promote knowledge management awareness throughout the firm. Figure 13 summarises the responses.

The majority of respondents 19 (34.55%) opposed the statement, saying it is not taking place at all. The second majority of respondents 16 (29.09%) said awareness exists. 4 (7.27%) believes implementation is being considered, whilst 3 (5.45%) said it has been recently implemented. 10 (18.18%) said there is mature implementation. The minority of respondents 3 (5.45%) said it is embedded throughout the firm.

5.2.3.3 Management Communication

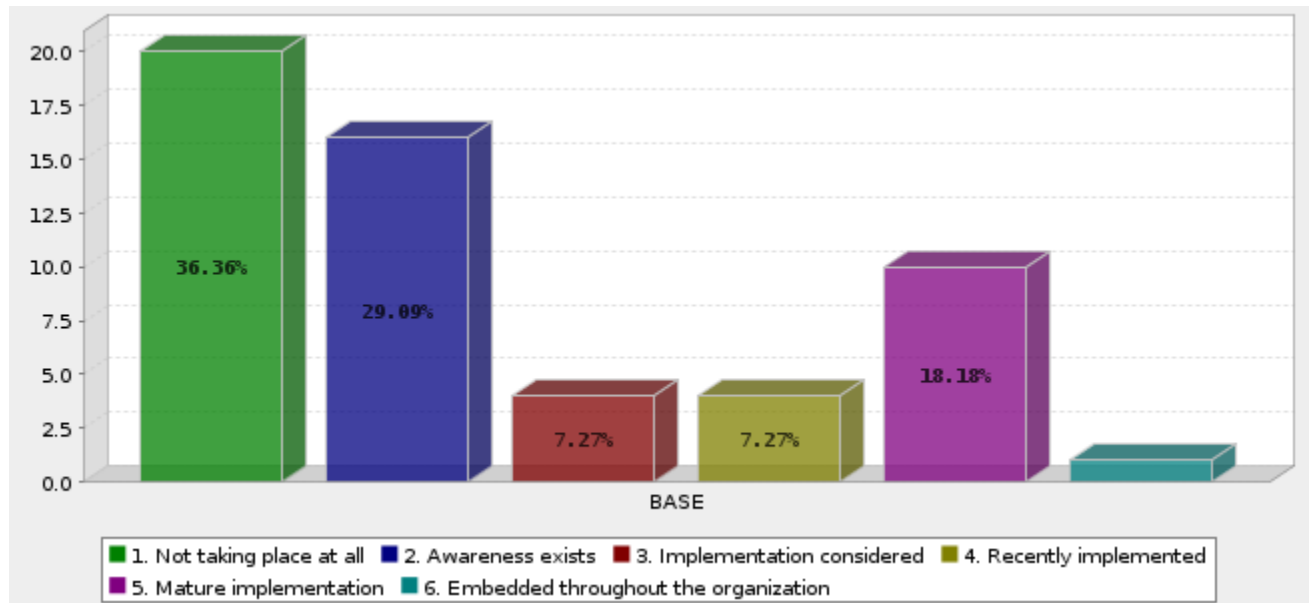


Figure 14: Response - Management Communication

The statement sought the views of the respondents about management communication. The researcher wanted to find out if knowledge and knowledge management are regular agenda points for the formal and informal two-way communication sessions held between management and employees. Figure 14 summarises the responses.

The majority of respondents 20 (36.36%) opposed the statement, saying it is not taking place at all. The second majority of respondents 16 (29.09%) agreed with the statement, saying awareness exists. 4 (7.27%) said implementation is being considered, whilst another 4 (7.27%) said it has been recently implemented. 10 (18.18%) asserted that there is mature implementation. The minority 1 (1.82%) said it is embedded throughout the firm.

5.2.3.4 Incentive Systems

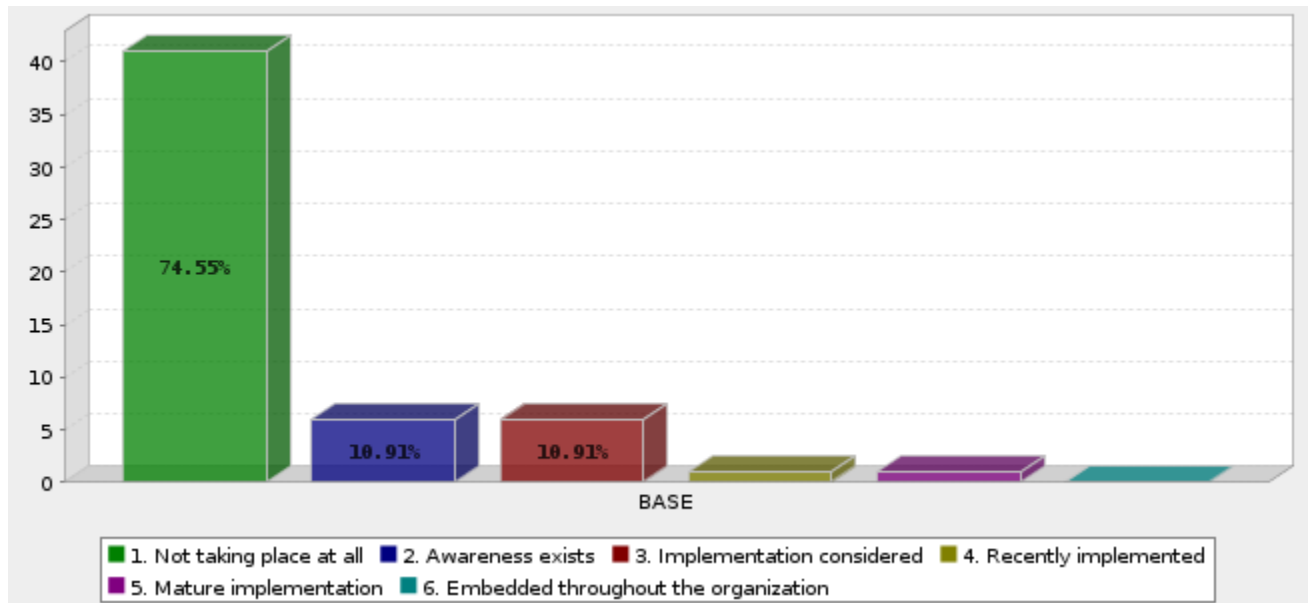


Figure 15: Response - Incentive Systems

The statement sought the views of the respondents about the incentive systems to promote knowledge management. Researcher wanted to find out if incentive systems for motivating employees to sustain the firm's knowledge base are institutionalised and successfully applied. Figure 15 summarises the answers.

The participants were unanimously opposed to the remark. The overwhelming majority of respondents 41 (74.55%) said it is not taking place at all. 6 (10.91%) said awareness exists, equally 6 (10.91%) said implementation is being considered. Whilst 1 (1.82%) said it has been recently implemented, another 1 (1.82%) also said there is mature implementations. 0 (0.00%) said it embedded throughout the firm.

5.2.3.5 External Structures

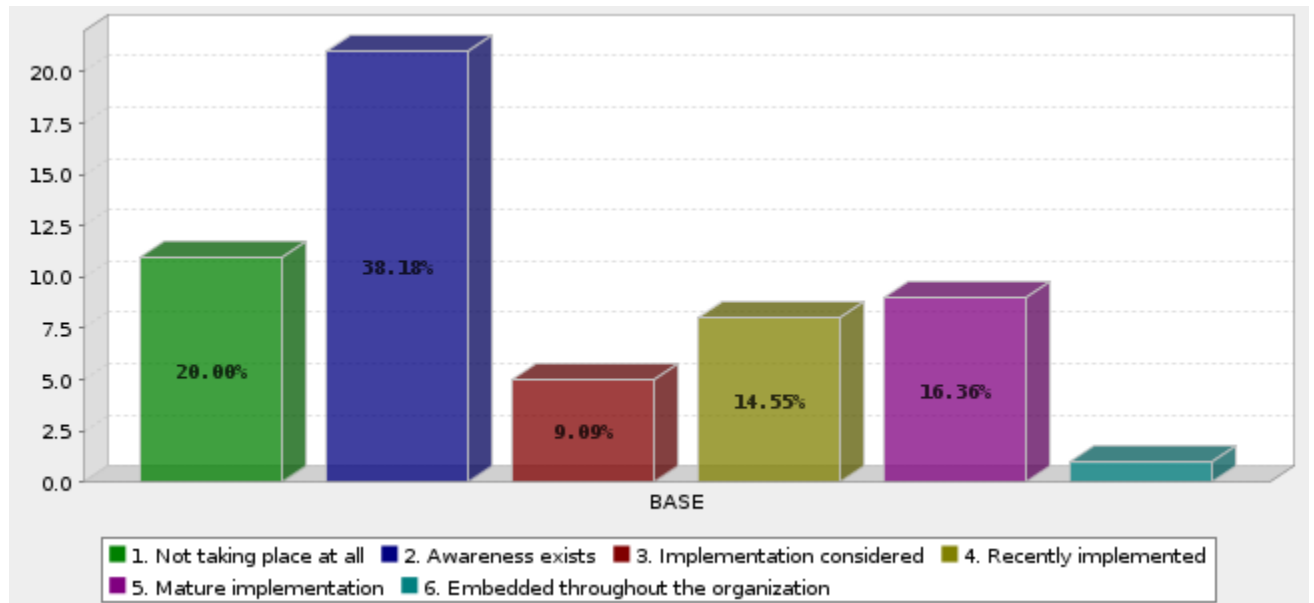


Figure 16: Response - External Structures

The statement sought the views of the respondents about external structures. The researcher wanted to know if management has established well-structured formal relationships with alliances, joint venture partners and value chain members. Also if there are shared knowledge objectives and how to achieve them are agreed upon between these entities. Figure 16 summarises the responses.

11 (20.00%) said management has not established well-structured formal relationships with external structures, saying it is not taking place at all. The majority of respondents 21 (38.18%) agreed with the statement, saying awareness exists. 5 (9.09%) said implementation is being considered, whilst 8 (14.55%) said it has been recently implemented. 9 (16.36%) believes there is mature implementations. The minority of respondents 1 (1.82%) said it is embedded throughout the firm.

5.2.4 Process

5.2.4.1 Knowledge Integration

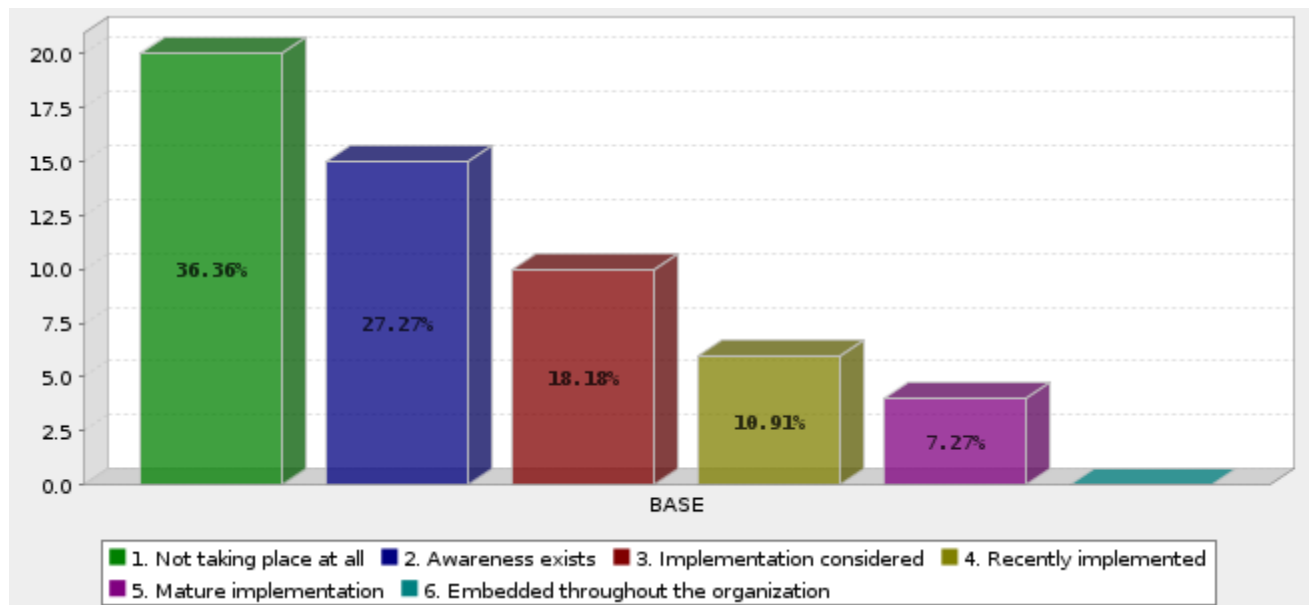


Figure 17: Response - Knowledge Integration

The statement sought the views of the respondents about knowledge integration. The firm readily engages its core knowledge resources and capabilities across business boundaries/functions to face new customer centric challenges. The researcher wanted to know if these are integrated with efficiency and speed using new knowledge to continuously adapt well-proven business processes. Figure 17 summarises the responses.

The statement received less assistance from the majority of respondents 20 (36.36%), saying knowledge integration is not taking place at all. The second majority of respondents 15 (27.27%) said awareness exists. 10 (18.18%) said implementation is being considered, whilst 6 (10.91%) said it has been recently implemented. 4 (7.27%) said there is mature implementations. None of the respondents 0 (0.00%) assisted the statement, saying knowledge integration is not embedded throughout the firm.

5.2.4.2 Information Management

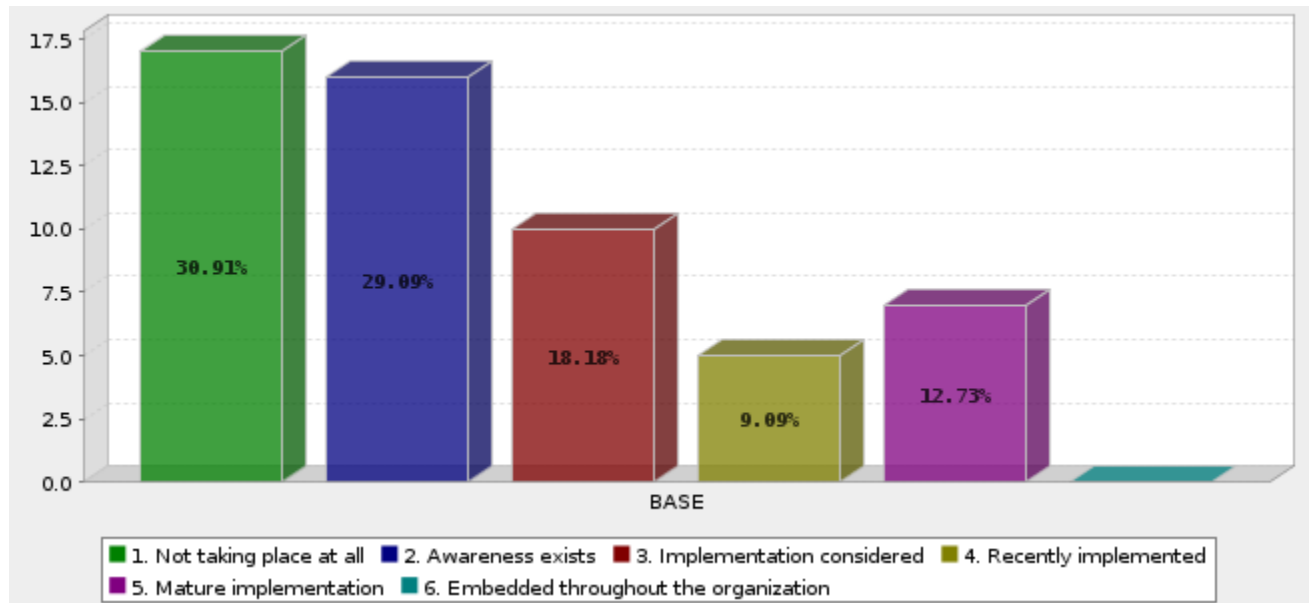


Figure 18: Response - Information Management

The statement sought the views of the respondents about information management. The researcher wanted to find out if processes for information acquisition, codification, and distribution are well established in the firm - and if these processes are used to enhance knowledge creation, creativity and customer value. Figure 18 summarises the responses.

The statement received less assistance from the majority of respondents 17 (30.91%), saying it is not taking place at all. The second majority 16 (29.09%) said awareness exists. 10 (18.18%) believe implementation is being considered, whilst 5 (9.09%) said it has been recently implemented. 7 (12.73%) said there is mature implementations. All the respondents agreed 0 (0.00%) that it is not embedded throughout the firm.

5.2.4.3 Business Intelligence

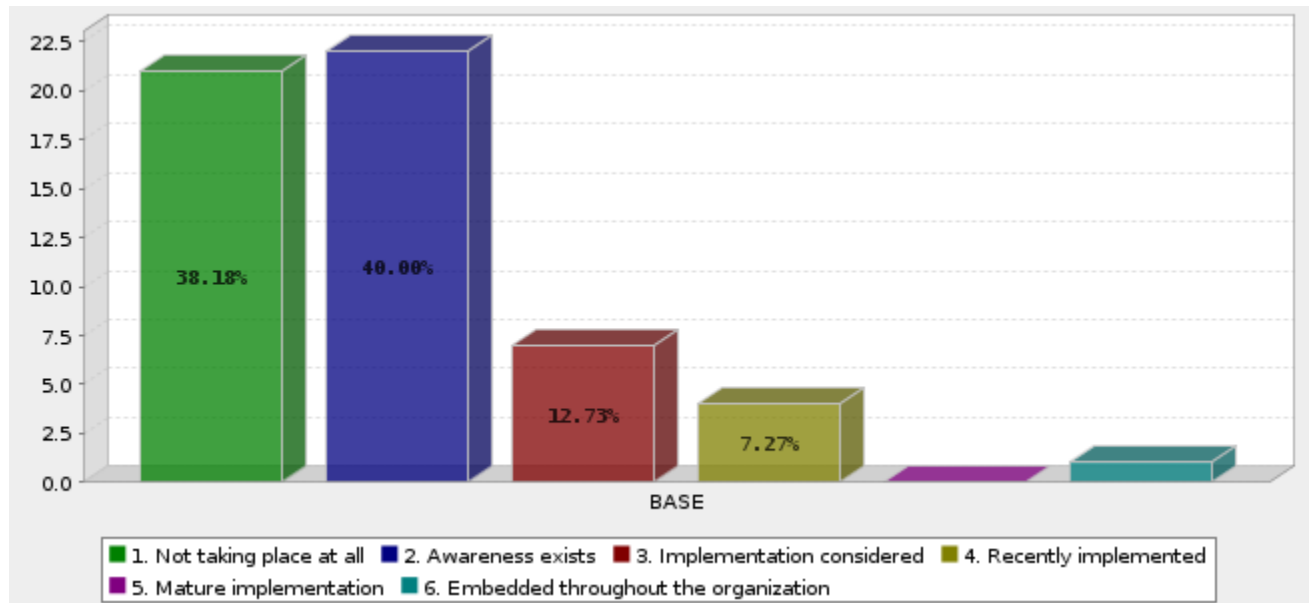


Figure 19: Response - Business Intelligence

The statement sought the views of the respondents about business intelligence. The researcher wanted to know if there is a sophisticated and ethical intelligence-gathering process that excels at scanning the surrounding for information on industry trends, competitor products and services, and customer profiles are institutionalised. Figure 19 summarises the responses.

21 (38.18%) of the respondents said business intelligence is not taking place at all while the majority of participants; 22 (40.00%) said awareness exists. 7 (12.73.09%) said implementation is being considered, equally 7 (12.73%) said it has been recently implemented. Another 7 (12.73%) said there is mature implementations. 4 (7.27%) said it is embedded throughout the firm.

5.2.5 Technology

5.2.5.1 IS Architecture

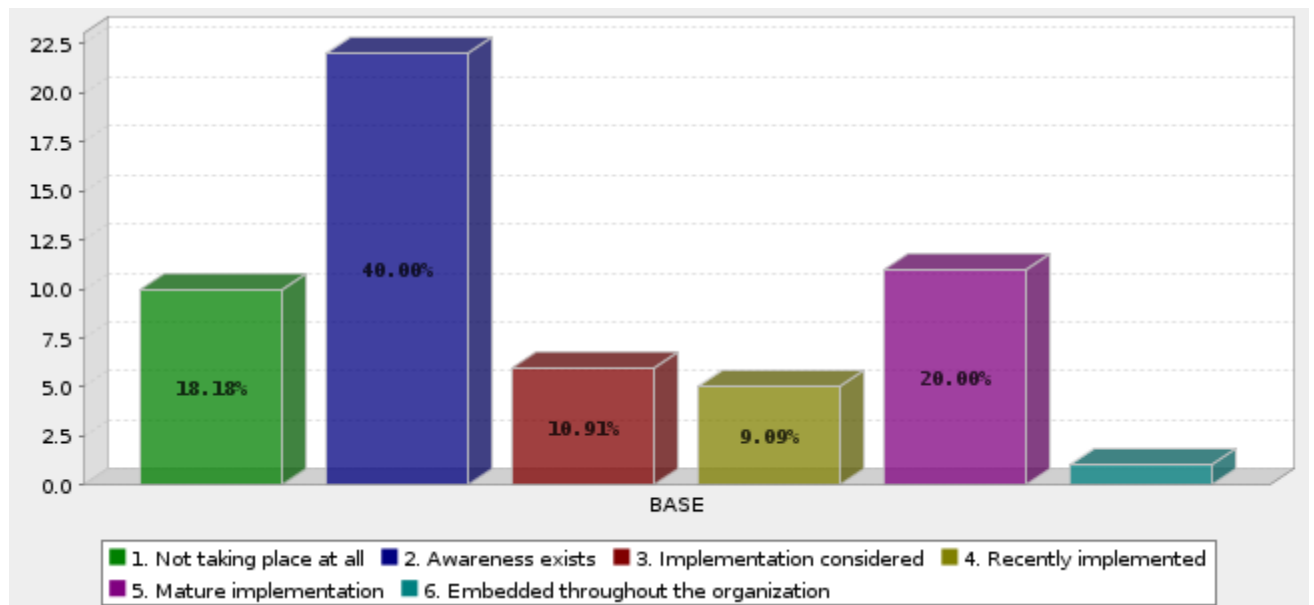


Figure 20: Response - IS Architecture

The statement sought the views of the respondents about the IS architecture at the firm. The researcher was aimed at discovering if the firm has adopted information systems designed to enhance the effective access to information, interpersonal and group communication and collaboration - and if these systems are widely available to members and actively used. Figure 20 summarises the responses.

10 (18.18%) of respondents said it is not taking place at all, whilst the majority of respondents 22 (40.00%) said awareness exists. 6 (10.91%) said implementation is considered, whilst 5 (9.09%) said it has been recently implemented. 11 (20.00%) declared there is mature implementation. The minority of respondents 1 (1.82%) said it is embedded throughout the firm.

5.2.5.2 IS Infrastructure

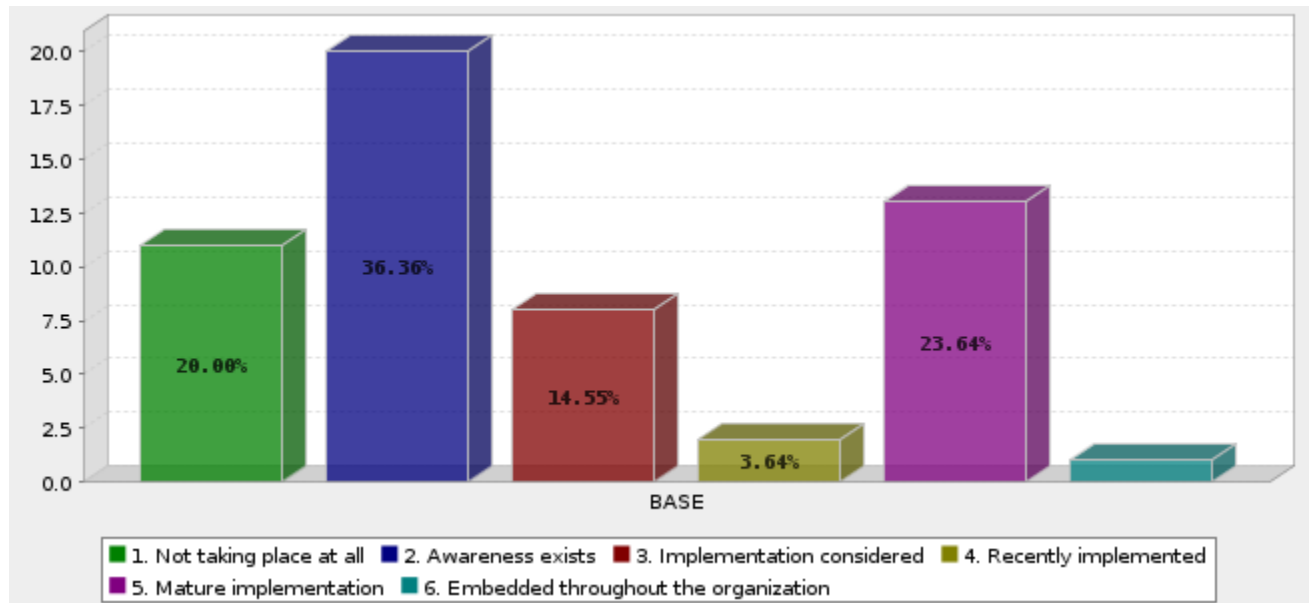


Figure 21: Response - IS Infrastructure

The statement sought the views of the respondents about the IS infrastructure. The researcher wanted to find out if the firm's information technology infrastructure is purposefully deployed and integrated to ensure sufficient and efficient accessibility and connectivity to all members, including members of the value chain. Figure 21 summarises the responses.

11 (20.00%) of the respondents did not assist the statement, saying it is not taking place at all; whilst the majority of the respondents 20 (36.36%) said awareness exists. 8 (14.55%) of the respondents said implementation is considered, whilst 2 (3.64%) suggested it has been recently implemented. The 13 (23.64%) said there is mature implementation. The minority of respondents 1 (1.82%) said it is embedded throughout the firm.

5.2.5.3 KM Application Software

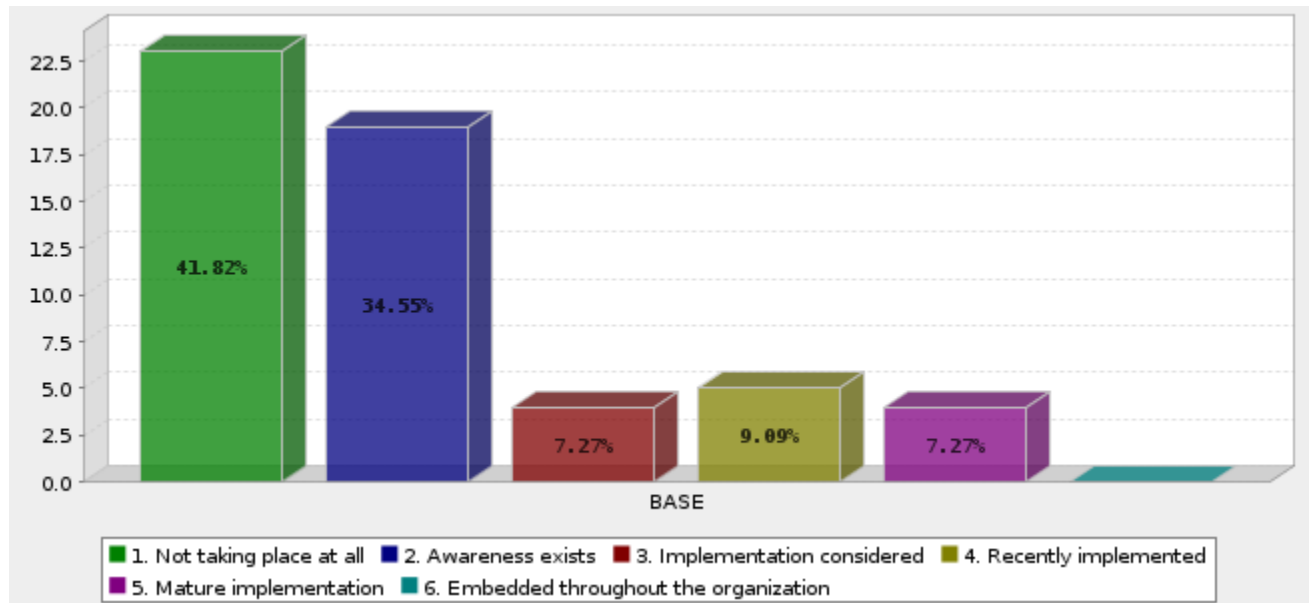


Figure 22: Response - KM Application Software

The statement sought the views of the respondents about the knowledge management application software. Dedicated knowledge management software applications are functionally integrated and continuously aligned with the firm's formal information system. This system is available and accessible to all members and used with commitment and dedication for the purpose of customer value creation. Examples are data warehousing, data mining tools and decision assistance systems. Figure 22 summarises the responses.

The majority of respondents 23 (41.82%) said it is not taking place at all, whilst 19 (34.55%) of the respondents affirmed that awareness exists. Then 4 (7.27%) said implementation is considered, and 5 (9.09%) revealed it has been implemented. 4 (7.27%) declared there is mature implementations. 0 (0.00%) said it is embedded throughout the firm.

5.2.6 Measures

5.2.6.1 Performance Indicators

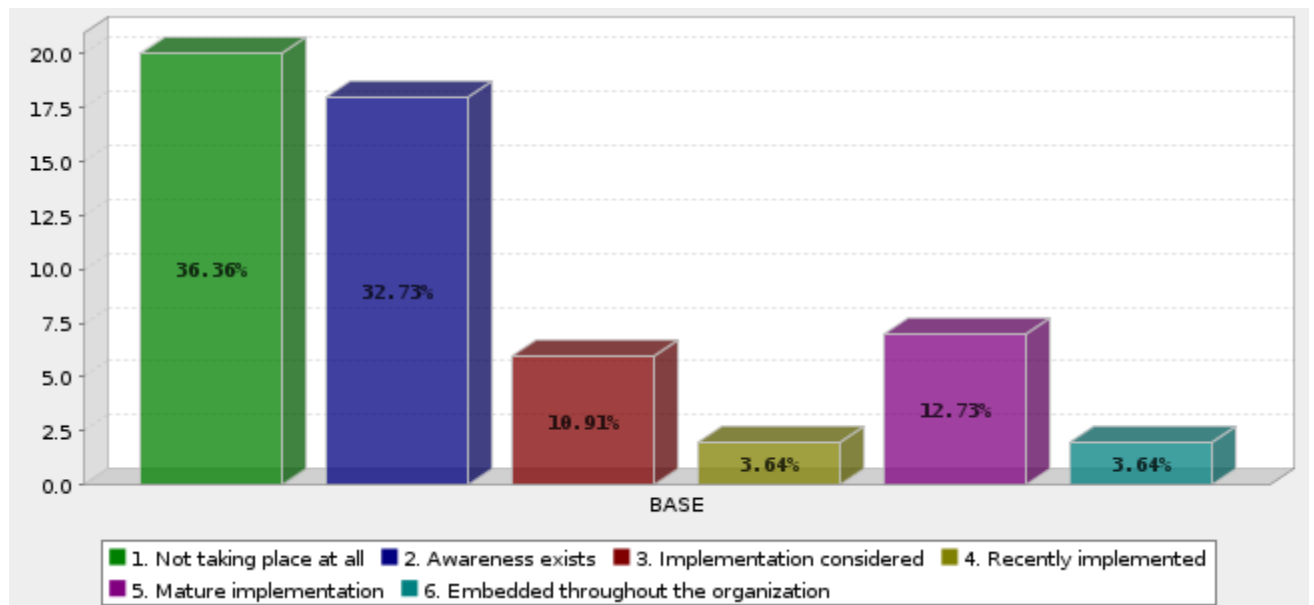


Figure 23: Response - Performance Indicators

The statement sought the views of the respondents about performance indicators. The researcher wanted to find out if a formal system to measure and manage intellectual capital and other intangible assets are maintained - and that the measures are used to assess the contribution that intellectual capital/intangible assets make towards the firm's performance. Figure 23 summarises the responses.

The statement received less assistance from the majority of respondents 20 (36.36%), saying it is not taking place at all. The second majority 18 (32.73%) said awareness exists. Then 6 (10.91%) said implementation is considered, while 2 (3.64%) said it has been recently implemented. The 7 (12.73%) declared that there is mature implementations. The minority of respondents 2 (3.64%) said it is embedded throughout the firm.

5.2.6.2 Usage of KM Tools

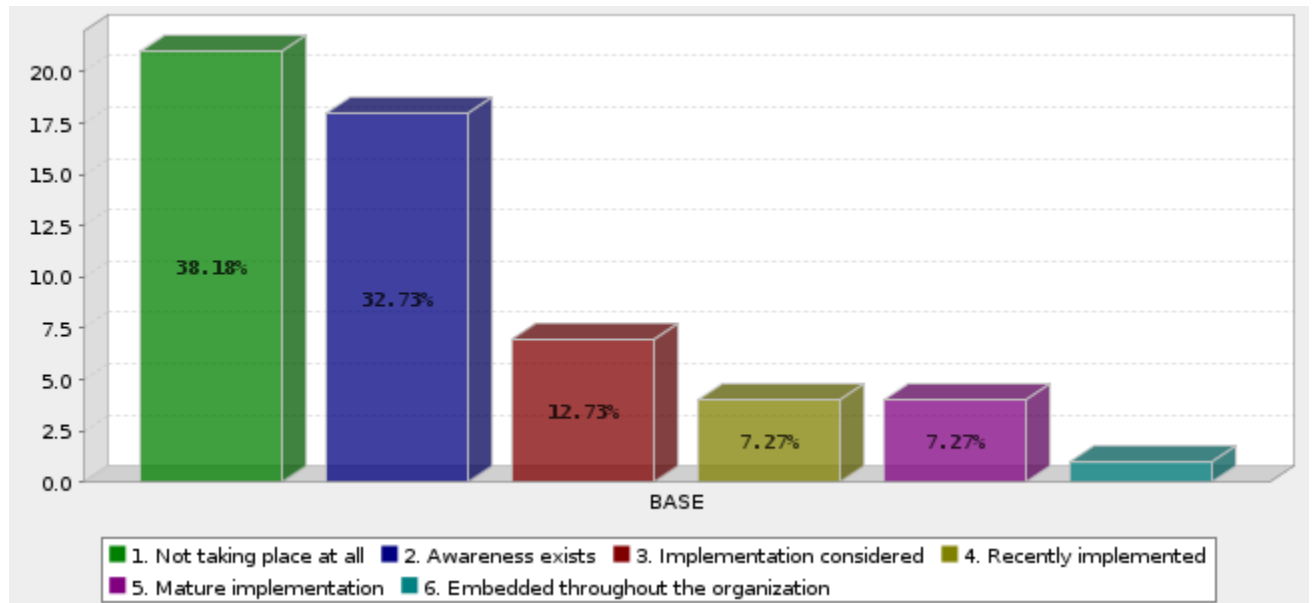


Figure 24: Response - Usage of KM Tools

The statement sought the views of the respondents about knowledge management tools. The researcher wanted to know if the usage of knowledge management applications and tools is regularly monitored and assessed. Figure 24 summarises the responses.

The majority of respondents 21 (38.18%) said it's not taking place at all, whilst 18 (32.73%) said awareness exists. Then 7(12.73%) said implementation is being considered, whilst 4 (7.27%) revealed it has been recently implemented. 4 (7.27%) declared there is mature implementation. The minority of respondents 1 (1.82%) said it is embedded throughout the firm.

5.2.6.3 KM Progress Reports

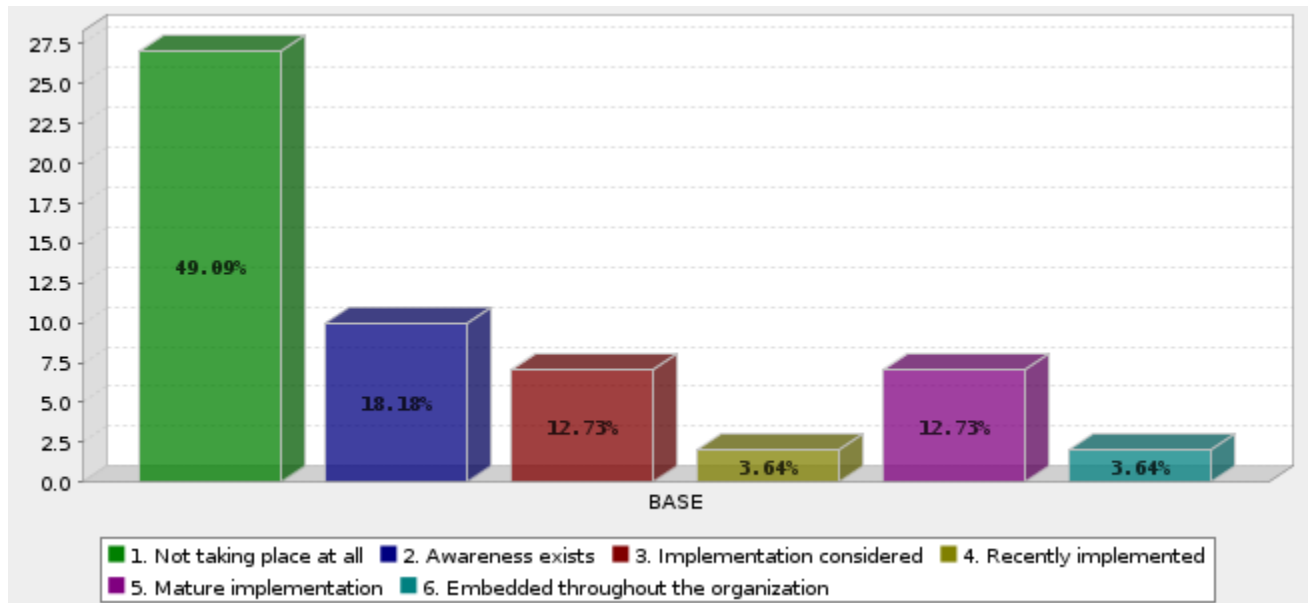


Figure 25: Response - KM Progress Report

The statement sought the views of the respondents about the knowledge management progress report. The researcher wanted to know if a system of monitoring, reporting and continual assessment of knowledge management programs and practices is maintained. Figure 25 summarises the responses.

The statement received less assistance of the majority 27 (49.09%) saying it is not taking place at all. The second majority 10 (18.18%) said awareness exists. Then 7(12.73%) affirmed implementation is being considered, whilst 2 (3.64%) revealed it has been recently implemented. 7 (12.73%) said there is mature implementation. The minority of respondents 2 (3.64%) said it is embedded throughout the firm.

5.2.6.4 Top Management

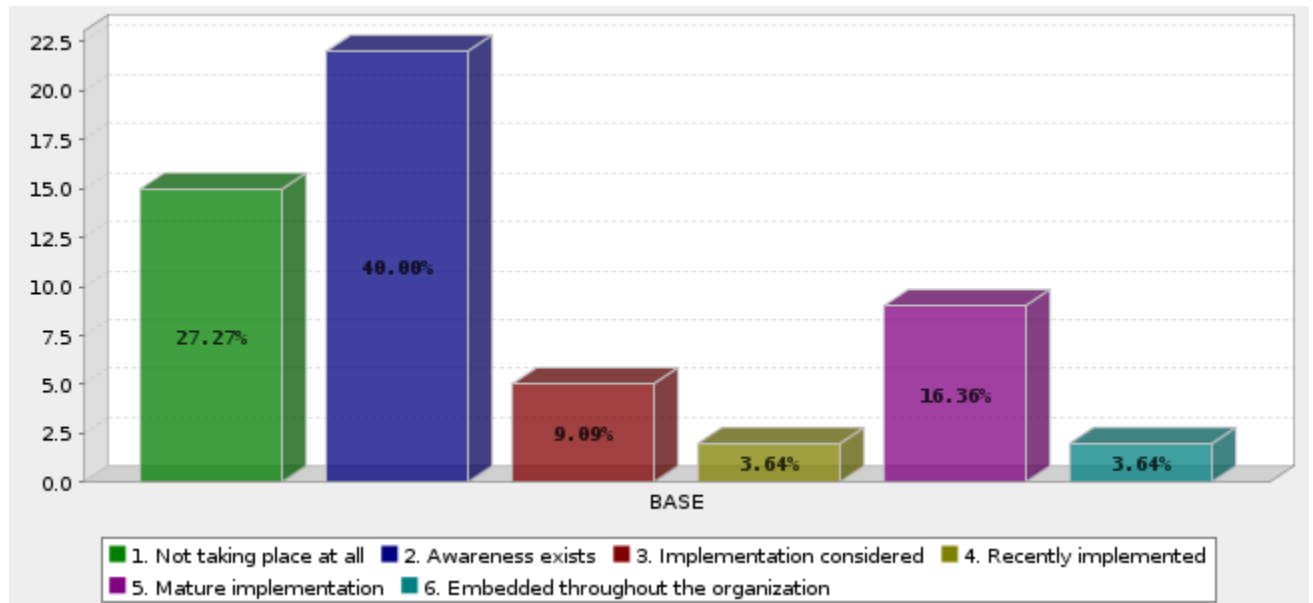


Figure 26: Response - Top Management

The statement sought the views of the respondents about top management. The statement reads thus: Top management is of paramount importance in presiding knowledge management within the firm. So it's imperative that top management fully understands the importance of fully aligning knowledge management practices with the firm's vision, strategy and objectives as well as culture, structure, processes, and technology. Figure 26 summarises the responses.

Respondents had different views about the statement. 15 (27.27%) said it is not taking place at all, whilst the majority of respondents 22 (40.00%) said awareness exists. Then 5 (9.09%) indicated that implementation is being considered, and 2 (3.64%) said it has been recently implemented. 9 (16.36%) said there is mature implementation. The minority of respondents 2 (3.64%) said it is embedded throughout the firm.

It is worth noting from the above that the respondents held contradictory perspectives regarding knowledge management practices in the City of Johannesburg. There are few points that respondents agree on unanimously. The one point that came out clearly is that knowledge management practices are not embedded throughout the firm. However, what is undisputable is the fact that the municipality is engaged in the knowledge management practices. The next part is the data collected through interview.

5.3 Findings of the Interview

This study had a low response rate. More often than not, senior managers are busy and don't have time to answer survey questionnaires. However, this is not the only reason that contributed to the study's low response rate. In 2016, there was a change in the political management of the City of Johannesburg. The ANC lost power to the DA-led coalition, a coalition of opposition parties.

There are senior managers affiliated or sympathetic to the ANC in the City of Johannesburg. Since the DA-led coalition took over, there is an element of discomfort amongst them. When the researcher circulated (via email) the survey questionnaire to senior managers for this study, the level of distrust was high.

As they always say, timing is everything. The survey was unfortunately timed shortly after a change in government and as a result levels of anxiety and distrust were quite high in the organization. However, the researcher could not delay the survey. In light of complimenting low response rates, the researcher interviewed a content expert of the City of Johannesburg in the form of the director of knowledge management.

This part presents the interview findings from the interviews conducted with the director of the knowledge management division. The interview is presented in a narrative form. The interview took place at the City of Johannesburg's head office, known as Metro Centre, on the 13th of October 2017, in Braamfontein.

The participant/interviewee holds a Master's degree in knowledge management, a black male, 53 years old and the director of the knowledge management department in the City of Johannesburg metropolitan municipality. He has been practicing knowledge management for more than 15 years.

5.3.1 Low Response Rate

The survey response rate was very low: Out of 234 invitations to complete the questionnaires, only 56 were returned. This was despite multiple rounds of invitation. Participants are usually reluctant to answer online surveys, but usually a response rate of at least a third is expected with online surveys. The director of the knowledge management of the City of Johannesburg

was asked about this and he said that “generally, and in particular in the City of Johannesburg, there is less interest in knowledge management. That could be the reason why the response rate was so low.”

5.3.2 Business Structure Assistance to KM

The City of Johannesburg is a big and bureaucratic business. The municipality has 33 000 employees and 904 directors. The municipality also has a top down, hierarchical business organogram. The pertinent question was; how does the City of Johannesburg manage knowledge?

“We use a decentralised approach,” said the director of knowledge management. He says the City has knowledge champions in every unit. The knowledge champions (also known as knowledge activists, coordinators, stewards, or representatives) are there to spread the knowledge gospel in their respective units, he added.

The challenge is that knowledge champions are not in the structure of the firm, the director revealed. They are just volunteers and don’t do the knowledge management function full time, he added. The director also indicated that they are advocating for the formalisation of the knowledge champions position to be part of the business structure.

He also said there is no Chief Knowledge Officer (CKO) in the City’s business structure. Yet there is a Chief Information Officer and Chief Technology Officer in the firm’s structure. He concluded that the structure in its current form doesn’t fully assistance the knowledge management programme.

5.3.3 COJ directors attitude towards KM

Leadership is generally recognised as the key driver for effective knowledge management. Directors were chosen for the study because it is believed they understand knowledge management better. But the survey findings suggest that the city senior managers are a bit indifferent to knowledge management. According to the knowledge management director, the city managers understand knowledge management fully. However, he’s not sure if they understand the value knowledge management adds in the firm.

5.3.4 KM Communication

32% of the respondents said communication is not taking place at all. He thought this is due to weak awareness. Secondly, the knowledge management communication function has been taken away from the department to the marketing and communication department, he added. The knowledge management department now relies on marketing and communications department to relay its message. As a result, there is a turf war between the two departments. That's not an ideal situation, the director complained.

18.8% of the survey respondents also said there is no knowledge vision in the City of Johannesburg. The knowledge management director put the blame on poor communication, which he said it needed to be improved.

5.3.5 KM Practices and its Embeddedness

The knowledge management director noted that, the City of Johannesburg has been practicing knowledge management for more than ten years. It also has a unit dedicated to knowledge management. The City of Johannesburg, says the director, also uses knowledge management champions to spread the knowledge management gospel throughout the firm. However, some units/departments are without knowledge champions. This is because the knowledge management champions are just volunteers, and not full time. In the final analysis, there are knowledge management practices in the City, he concluded.

5.3.6 Role of KM in Improving Customer Service

Customer services deals directly and indirectly with the clients. Customer service is also regarded as the face of the firm. It is believed that knowledge management contributes to effectiveness as well as improve customer service. 15 (27.27%) survey respondents said knowledge is not being used to improve customer service. The knowledge management director in the City of Johannesburg is also not sure how knowledge management contributes to the customer service of the metropolitan council.

5.3.7 Knowledge Retention

The resignation and retirement of skilled employees across departments create a challenge on the retention of knowledge and preservation on institutional memory. Lack of retention

strategy contributes to the challenge. The City of Johannesburg has a retention strategy to retain knowledge and preserve institutional memory, said the knowledge management director.

- The City of Johannesburg writes case studies annually to retain knowledge. When officials go on study tours on behalf of the City, they are requested to outline the lessons learned, which are documented and circulated.
- Employees who possess knowledge are interviewed to get knowledge from them. When they leave the firm, knowledge remains with the City. However, it is only those who are identified that are interviewed. The City is too big to can identify everyone who possesses knowledge.

5.3.8 The Effect of Changes of Political Management

After the 2016 local government elections, there was a change in the City of Johannesburg's political management. The ANC lost power (after more than 20 years governing the COJ) to the Democratic Alliance led coalition - a coalition of opposition parties.

According to the knowledge management director, the change in political management has not affected the knowledge management programme at all. "As a matter of fact, it has enhanced the municipality's knowledge management programme. For the first time in our democracy the City of Johannesburg is led by a coalition government. This makes a good case study, especially in terms of the lesson learned," he said.

5.3.9 Degree of Management Assistance

In its study, the South African City Networks (2006) observed that, it is a challenge to adequately 'convince' senior managers and politicians of importance of knowledge management could play on improving the efficiency and productivity of the organisation. However, in the City of Johannesburg, knowledge management enjoys the assistance of the political administration, said the knowledge management director. He further said this is also strengthened by the fact that the Member of the Mayoral Committee for Finance (MMC) holds a PhD in KM, is also lecturer of knowledge management at a university. According to the director, the MMC for Finance has thrown his weight fully behind the knowledge

management programme. He has also offered his expertise when needed and committed himself to help raise funds for the advancement of knowledge management programme.

5.3.10 Extent of KM Benefits to the City of Johannesburg

The City of Johannesburg, which is also regarded as a Smart City, has been practicing knowledge management for more than ten years now, as already indicated. How has the knowledge management benefited the metropolitan council? The knowledge management director has categorised the benefits into two categories: business and individual.

Business level

- The City has managed to build a knowledge repository and an organisational memory.
- Knowledge management has since been linked to creativity – the City has been able to increase creativity and creativity by collaborating with the Johannesburg University and the Witwatersrand University.
- Improved the firm's deeds through increased efficiency, creativity, productivity and quality.
- Better decisions, reduced re-work, streamlined processes, greater collaboration and greater data integrity.
- Increase financial value of the firm by treating people's knowledge as assets peculiar to traditional assets like inventory and capital facilities.

Individual level

- Learning and sharing give employees different dimensions
- Knowledge management training is conducted at the department's expense
- Knowledge management gives employees with opportunities to develop their skill and experience through group work coupled with sharing other people's knowledge and learn from each other, hence enhancing personal performance leading to better career development.

5.3.11 Technology

Technology is of paramount importance when it comes to facilitating knowledge management. Technology is also regarded as a key contributor which acts as an enabler of knowledge management. Information communication technology in the knowledge management is classified into two types which are communication technologies and decision making technology. Technology assistance enables internal as well as external communication, workflows together with interactive access in a multitude of information formats.

The City of Johannesburg uses the following systems for the areas mentioned below:

- Document management – Electronic Document Management System
- Property Valuation – Value Assist 3 System
- Meter reading – Meter Reading Quality Control

The City also uses the Microsoft Share Point platform to encourage and promote collaboration and repository. The knowledge management department works closely with the ICT department. The City of Joburg Member of the Mayoral Committee for Finance wants to turn Joburg into a “Tech-savvy city”.

5.3.12 Capacity of the KM Department

The location and format of knowledge management standards in local governments appears to be a staggering concern for all the advanced knowledge management projects. In many instances, if knowledge management lacked a ‘physical’ presence in the official organogram of the municipality, it got little regards in terms of resources and assistance (South African Cities Network, 2006)

According to the knowledge management director, the City of Johannesburg has 33000 employees and the knowledge management department has 12 staff members to serve the entire business. “We ideally need 30 more people”, he said. On another note the knowledge management department has an annual budget of R8 million. “Sometimes the department runs out of money in the middle of the year,” added the director. He said the department lacks the ability (in terms of finance and staff) to preside and manage knowledge effectively in the firm.

5.3.13 KM Challenges

The knowledge management director has acknowledged the challenges faced by the City of Johannesburg. These challenges are listed below:

- No buy-in from employees
- Lack of appreciation of knowledge management
- Lack of capacity in terms of human resource in the knowledge management department
- Low budget for knowledge management
- Turf war between the knowledge management department and communication and marketing department

5.3.14 KM Solutions

The knowledge management director proposed the following as a solution:

- The records and information departments fall under different units. The solution is to club them together so that they fall under the same unit. That would benefit knowledge management implementation.
- There is less engagement regarding knowledge management in the City of Johannesburg. Yet engagement is key for knowledge management. The proposed solution is to engage peers and colleagues on a regular basis to promote knowledge management
- Empowerment to inculcate the knowledge management practices

The next part deals with the discussion of the outcomes.

5.4 Discussion

The preceding part presented findings of the study. The results were deduced from both the survey and interview conducted. The discussion is influenced by aims and objectives of the study, which are:

- To determine the existence of knowledge management (formal or informal) practices in the local government.
- To establish if the culture of sharing knowledge exist within the firm.
- To establish if there are technological resources available to facilitate effective knowledge management.
- To find if the business structure and strategy gives room for knowledge sharing

5.4.1 Discussion of Findings

The local government has adopted knowledge management at a snail pace and with less enthusiasm. The study has observed that there is not enough research conducted in the local government regarding knowledge management practices. This study scrutinized the knowledge management practices of the local government in South Africa. The City of Johannesburg was chosen as the case study. In this part, we discussed the findings of the research findings based on the objectives of the study.

5.4.1.1 To determine the existence of knowledge management (formal or informal) practices in the local government.

In the COJ, there is a department dedicated to the facilitation and management of knowledge management. City of Johannesburg also has the technological infrastructure that enables the capturing, storing and dissemination of knowledge. The City of Johannesburg encourages the exchange of information by conducting knowledge management workshops and writing case studies and disseminating them. Whilst there is knowledge sharing within departments, departments don't share knowledge with each other.

The City of Johannesburg has appointed knowledge champions to spread the knowledge management gospel in their respective departments. Knowledge management champions are trained volunteers who act as knowledge management ambassadors in their respective departments. The adoption of knowledge management needs the assistance and commitment from top management. The knowledge management director revealed that, knowledge management enjoys the assistance of political management in the municipality.

In the final analysis, the City of Johannesburg has formal and functional knowledge management programmes in place. Knowledge management is still work in progress and best practices are still emerging. All in all, there are knowledge management practices in the local municipality.

5.4.1.2 To establish if there is Culture of Sharing Knowledge in the Firm

The capacity to convey knowledge from one section to another has been found to contribute to business performance. The majority respondents (22%) believe that there is no culture of knowledge sharing in the City of Johannesburg. However the director of knowledge management department holds the view that the culture of sharing knowledge exists in the City. The knowledge management director demonstrated his view with the following:

- The knowledge management department hosts an annual knowledge management event. Through this event, the knowledge management department exposes employees to different knowledge management products. He further said the event is widely promoted within the firm. He, however, admitted that attendance is not as good as expected;
- The City has a magazine known as Innovate, a brain child of the knowledge management department. The City uses the magazine (published on a three monthly basis) to share knowledge management information with the employees;
- The knowledge management departments write case studies (annually) on the best practices and lessons learned. The case studies are then distributed in the firm as well as outside;
- The organisation uses the intranet to store and share information;

- The City uses knowledge management champions to support and preside knowledge-sharing across functions, departments, municipal entities and external stakeholders. The City also exposes knowledge champions to the best practices by visiting other firms, such as the First National Bank and Eskom, to name but two, which they benchmark themselves against. That's how they empower the knowledge champions to help them carry out the knowledge management mandate.
- Efficient knowledge exchange by the hosting of official delegates
- Sharing and celebrating creativity as well as the production of the annual creativity magazine.
- Through Jozinet - the city's portal JIKE inspires staffs to submit innovative ideas with the objective of improving institutional deeds.

However, the study has found barriers to knowledge sharing:

- Poor communication: the majority of respondents (32%) said communication is not taking place at all.
- 74.55% of respondents said there is no incentive to motivate employees to sustain the firm's knowledge.
- 36.36% of respondents said there is no regular communication with regards to formal and informal communication between employers and employees.

The study has exposed areas of concern regarding knowledge sharing in the City of Johannesburg. These included lack of policies and incentives to encourage knowledge sharing within the City.

5.4.1.3 To Establish if there are Technological Resources Available to Facilitate Effective KM

Information communication technology is one of the knowledge management enablers. Interestingly, 23% of the respondents said there is no knowledge management system in the City of Johannesburg. The COJ has an information technology system in place. The

municipality uses SAP for human resources, finance, and operations. The City has an information technology platform and assistance network. It uses the Microsoft Share-point Platform, which promotes collaboration and repository. The COJ also has a database that stores speeches, policies, regulations, and procedures. The information in the database is current and updated regularly.

The City of Johannesburg also uses the following systems for the areas mentioned below:

- Document management – Electronic Document Management System
- Property Valuation – Value Assis 3 System
- Meter reading – Meter Reading Quality Control

The metropolitan council uses the Intranet to assistance knowledge sharing and storing. The municipality has a website, which comprises of notices, job vacancies, IT policies, COJ policies and employee benefits. The municipality also runs a Geographic Information System. The basic technologies are working very well in terms of sharing, creating and storing knowledge. The COJ possesses sufficient information communication technology infrastructure to preside knowledge management efforts.

5.4.1.4 To establish if the Business Structure And Strategy are Conducive to Knowledge Sharing

The City of Johannesburg is a big and bureaucratic business, with a hierarchical structure. Management has two wings which are political and administrative. The political management is under the leadership of the executive mayor and mayoral committee. The political management gives the municipal council political direction. The administration, on the other hand, is under the leadership of the municipal manager. The administration deals with strategy and policy formulation. The hierarchical structure is not conducive for knowledge management. So the structure doesn't fully assistance the knowledge sharing within the firm.

The City of Johannesburg's strategy is the Growth and Development Strategy (GDS) 2040. The GDS is informed by the five-year Integrated Development Plan. The GDS therefore

frames the IDP charting long-term strategies, ambitions and over-arching choices relating to prioritised areas of focus.

The City of Johannesburg is mandated to structure a medium-term IDPs and aligned annual business plans and budgets. This IDP serves as an instrument for incremental five-year planning (assistance by annual revisions), hence facilitating achievement of long-term objectives, such as that expressed within the GDS. The IDP, a consultative process with the local communities, promotes knowledge sharing amongst the stakeholders, particularly between the municipal council and local communities. So the strategy encourages knowledge sharing.

Table 5: Summary of the research findings

Objective	Result
To ascertain the existence of knowledge management (formal or informal) practices in the local government	<ul style="list-style-type: none"> • Study found that the City of Joburg is engaged in KM practices. • There is a department dedicated to KM.
To establish if there is culture of sharing knowledge in the firm	<ul style="list-style-type: none"> • Study found that there is a culture of sharing but sharing is not happening between departments.
To determine if there are technological resources available to facilitate effective KM	<ul style="list-style-type: none"> • There is adequate technology to facilitate KM. • Business is investing more in ICT and less in KM.
To determine if the business structure and strategy are favourable to knowledge sharing	<ul style="list-style-type: none"> • Business structure (bureaucratic) doesn't assistance KM • Strategy assistances KM through IDP, a consultative process.

The research findings revealed that knowledge management practices exist at City of Johannesburg Metropolitan Council. The next part discusses recommendation and conclusion.

CHAPTER 6: RECOMMENDATIONS, FURTHER RESEARCH AND CONCLUSION

6.1 Introduction

This study consisted of six chapters. This is the last chapter and it presents the following: recommendations, which are the same as the views of the participants (both in the survey and interview) in this study, further research and conclusion.

6.2 Recommendations

The research has exposed shortcomings that prevent the effective and efficient implementation of knowledge management in the City of Johannesburg metropolitan council. The researcher proposes the following recommendations:

6.2.1 Appoint a Chief Knowledge Officer

The knowledge management director has revealed that the City of Johannesburg doesn't have a Chief Knowledge Officer (CKO). Yet the municipality has a Chief Information Officer and Chief Technology Officer. It is recommended that the metropolitan council appoints a CKO, who will represent knowledge management at the highest level.

6.2.2 Educate Directors about KM

Directors were selected for the study because it was assumed that they understand knowledge management better. But from the data collected, there is a suggestion that some directors are not clear what knowledge management is all about. Directors are supposed to give leadership and direction in the firm. But if they don't have complete comprehension of knowledge management, they can't give leadership. Knowledge management will only work if the top management understands it, embraces and promotes it. Recommendations are that the directors at the City of Johannesburg municipal council be educated about knowledge management and its benefits.

6.2.3 Improve Communication

Poor communication hinders knowledge management. In the City of Johannesburg 32% of the respondent pointed out an absence of knowledge management

It is understandable why the communication function has been taken away from the knowledge management department to the marketing and communications department: communication is the competency of the marketing and communications department. To improve communication, the knowledge management department must accept that communication is the competency of the marketing and communications department. This will stop the turf war between the two departments. The knowledge management department should allow the marketing and communications department to relay its message to the targeted audience. Knowledge management department should also improve its relations with the communications department.

6.2.4 Design a Monitoring and Evaluation System

Knowledge management should have measurable results but according to surveys there are no evaluation procedures for knowledge management. It is recommended that a monitoring and evaluation system be designed and implemented to monitor the value knowledge management adds in the firm

6.2.5 Invest in Knowledge Management

ICT is an enabler of knowledge management; it is not knowledge management. The interview with the knowledge management director revealed that the City of Johannesburg is investing more on ICT and less on knowledge management. As a result, knowledge management is not living up to its full potential in the metropolitan municipality council. Knowledge management needs to be equally assisted and promoted so that it can be effectively implemented. So the COJ should invest in knowledge management as much as it does in ICT

6.2.6 Increase KM budget

The study has revealed that the City of Johannesburg is investing in the knowledge management. However, the budget for knowledge management is not enough, if not low. Sometimes the knowledge management department runs out of funds in the middle of the year, as revealed by the knowledge management director. The City should increase the knowledge management budget. Otherwise, knowledge management will remain a sideshow.

6.2.7 Increase KM staff

One of the internal factors impacting on the municipal poor-performance is adequate staffing, COGTA (2009). The director of the department of knowledge management in the City of Johannesburg revealed that his department is short staffed. That means the knowledge management department lacks the capacity to deliver on its knowledge management mandate. There are 33 000 employees in the City of Johannesburg. The knowledge management department has 12 staff only to service the entire City of Johannesburg. The department is undoubtedly under-staffed. It is recommended that the knowledge management department be capacitated with staff in order to carry out its mandate effectively.

6.2.8 Formalise the knowledge champions position

The City of Johannesburg uses knowledge champions to spread the knowledge management gospel in their respective departments. The challenge is that the knowledge champions perform the knowledge management function on a voluntary basis. That means they do the knowledge management function during their spare time. If they don't perform, they cannot be held accountable because knowledge management is not their core function. Additionally, knowledge champions are not specialists in the knowledge management field.

Structurally, knowledge champions don't report to the knowledge management department. That means their role is not formalised. There are also no performance measures for their knowledge management role. It is recommended that the Metropolitan Council appoints knowledge champions on a full time basis. That means the COJ should include knowledge champions in the firm's structure and formalise the role.

6.2.9 Design knowledge sharing strategy

Knowledge sharing involves the transfer or dissemination of knowledge throughout the firm. In Chapter 2, it was observed that the value of knowledge grows and increases as it is shared within a firm. When employees use knowledge, they add more insights to it and refine it further, thereby adding more value.

According to the study, there is no incentive scheme to encourage employees to share knowledge in the City of Johannesburg. It would be unrealistic to assume that all employees

are willing to share knowledge without encouraging them to do so in a form of reward. Reward systems (either intrinsic or extrinsic) can assist knowledge management activities. It is recommended that the municipal council design the knowledge sharing strategy and policies. This will create a conducive surrounding for knowledge sharing in the City.

6.2.10 Implement KM Practices in the Customer Service Departments

Customer service is at the heart of service delivery in the municipality. When the customer service is poor, service delivery is also affected. Customer service is the face of the firm. This is a department that deals with customers directly and indirectly. So it must be effective and efficient.

15 (27.27%) survey respondents said knowledge is not being used to improve customer service. During the interview with the knowledge management director, he also said he is not sure how knowledge management contributes to improving customer service. That means there are no knowledge management practices in the customer service. If there are any knowledge management practices, they are not recognised. It is recommended that the knowledge management department should start implementing knowledge management in the customer service department.

6.2.11 Share Knowledge between Departments

Whilst there is knowledge sharing within departments, departments themselves don't share knowledge with each other. That means the City of Johannesburg departments are working in silos. It is imperative that departments in the City share knowledge amongst each other.

6.2.12 Management Assistance for KM

According to the knowledge management director, knowledge management enjoys the assistance of the political management. This is also strengthened by the fact that the Member of the Mayoral Committee for Finance holds a PhD in KM and also lectures knowledge management at a university. However, the words of political management don't match their actions. After declaring assistance for the knowledge management programme, the knowledge management department still lacks the human and financial resources. Management should keep its word and assist knowledge management in word and in deed.

6.3 Further Research

This study has revealed that the City of Johannesburg Metropolitan Municipal Council would benefit from further research.

One of the challenges this study faced was the low rate response (23.93%). That means the survey didn't get good participation from the firm's directors regarding the knowledge management practices in the metropolitan municipal council. This opens up an opportunity for further research, which would aim for a better or higher response from the employees.

The interview was confined to one senior manager: the director of the knowledge management department in the City of Johannesburg municipal council. This limited the interview to one participant's view. Future research should canvass for a broader view by extending the interview/s to more participants.

The study was limited to the metropolitan council's directors, assuming that they have a full grasp of what knowledge management is all about, and that their judgment will be objective. Directors have an aerial view of the firm's knowledge management practice: They are more focused on strategy and rely on reports to assess the state of knowledge management in the firm. For future research, the study should be extended to other levels. The researcher holds the view that would be representative of the entire business and expand the firm's view on knowledge management.

The study was confined to the City of Johannesburg and excluded the Municipal Owned Entities (MOEs). The MOEs form part of the City of Johannesburg and report directly to the City Manager. Further study should involve the MOEs in order to make a comprehensive assessment of the knowledge management practices in the City of Johannesburg.

There is a necessity for further research which arises from certain area limitations of the study. Further research should cover those knowledge management practices that have not been investigated in this study.

6.4 Conclusion

This part concludes the study. The study observed that there is not enough research conducted in the local government regarding knowledge management practices. This study investigated

the knowledge management practices in the local government in South Africa. The City of Johannesburg was selected as a case study.

The local government's constitutional mandate is to deliver effective and quality services to the local communities. However, the municipalities in South Africa are failing to fulfil their constitutional mandate of delivering quality services to the communities. It has been proposed that the local government should adopt knowledge management to improve service delivery.

The study found that the City of Johannesburg is engaged in knowledge management practices. There is a unit dedicated to the facilitation and management of the knowledge management. However, there were gaps that were identified. For instance, there is no monitoring and evaluation system for knowledge management. To close the gaps, the researcher has made some recommendations.

The City of Johannesburg has invested more in information technology than in knowledge management. The City needs to give knowledge management equal assistance in terms of budget and staffing. Otherwise, knowledge management will remain a sideshow. Despite the knowledge management challenges facing the Metropolitan Council, the City of Johannesburg has the potential to implement a successful knowledge management.

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APPENDIX A: Survey Questionnaire

Thank you for participating in this survey.

The purpose is to identify knowledge management practices in the South African local government, specifically the City of Johannesburg. The survey consists of only 24 multiple choice questions asking you to rate a particular practice in the municipality and one can complete in 5 minutes.

The survey is part of academic research and only the aggregated findings are of interest, individual respondents will not be identified in the research report (in fact your information is not even asked).

Scoring from 1-6 for each statement: 1- Not taking place at all, 2- Awareness exists, 3- Implementation considered, 4- Recently implemented, 5- Mature implementation, 6- Embedded throughout the firm.

Leadership

1 Vision

The firm has a vision on the critical importance of knowledge for the achievement of its objectives. This is clearly articulated and mutually shared by all members.

2 Strategy

The firm has implemented a strategy to create and apply knowledge that aligns with the operational objectives of enhancing customer value. This knowledge strategy has been clearly and purposefully communicated to all levels.

3. Business learning

The advantage to be gained from exploiting customer, supplier, distributor, alliance and partner knowledge is well understood throughout the firm. Learning objectives with respect to this knowledge are jointly set and actively pursued.

Culture

4 Communication

Knowledge and information communication across business boundaries is intense, open, widespread and free flowing and underscored by mutual trust, understanding and respect.

5 Customer orientation

All members share a deep sense of commitment to continually apply business knowledge to customer service, customer problems solving, and customer value creation. Sharing customer experiences with others in the firm and the value chain has become part of daily routine.

6 Collaboration

Collaborative relationships that exist in the form of alliances, joint ventures, partnerships and other members of the value chain are constantly used by business employees to create customer value. Joint knowledge development, creativity, and knowledge sharing are standard practice in these relationships.

7 Workplace

The value of using the physical work surrounding (open areas, co-located offices, informal meeting places) to promote knowledge sharing and information exchange are fully realised by all members of the firm. Management openly assistances and encourages this practice.

8 Knowledge sharing

A natural awareness of the mutual benefits of sharing knowledge is instilled in all members of the firm and has become a way of life. Management recognises knowledge sharing and knowledge creation efforts and firmly discourage knowledge and information hoarding.

9 Knowledge contribution

A culture of voluntary contributions to the firm's knowledge-base is widely entrenched amongst all members, teams and groups. Utilisation of the knowledge-base is likewise well engrained as standard operating procedure.

Structure

10 Teams and Groups

It is standard practice for the firm to staff project teams, task forces and workgroups with multi-disciplinary and cross-functional members in order to exploit all embodied knowledge. Every opportunity to involve value chain members in these teams is likewise exploited.

11 Knowledge management roles

Specific knowledge management roles are defined, appointments made and responsibilities allocated. Leaders of operational entities accept responsibility to promote knowledge management awareness throughout the firm.

12 Management communication

Knowledge and knowledge management are regular agenda points for the formal and informal two-way communication sessions held between management and employees.

13 Incentive systems

Incentive systems for motivating employees to sustain the firm's knowledge base are institutionalised and successfully applied.

14 External structures

Management has established well-structured formal relationships with alliances, joint venture partners and value chain members. Shared knowledge objectives and how to achieve them are agreed upon between these entities.

Processes

15 Knowledge integration

The firm readily engages its core knowledge resources and capabilities across business boundaries/functions to face new customer centric challenges. These are integrated with efficiency and speed using new knowledge to continuously adapt well-proven business processes.

16 Information management

Processes for information acquisition, codification, and distribution are well established in the firm. These processes are used to enhance knowledge creation, creativity and customer value.

17 Business intelligence

A sophisticated and ethical intelligence-gathering process that excels at scanning the surrounding for information on industry trends, competitor products and services, and customer profiles are institutionalised.

Technology

18 Information system architecture

The firm has implemented information systems designed to enhance the effective access to information, interpersonal and group communication and collaboration. These systems are widely available to members and actively used. Examples are groupware, corporate intranets and portals.

19 Information technology infrastructure

The firm's information technology infrastructure is purposefully deployed and integrated to ensure sufficient and efficient accessibility and connectivity to all members, including members of the value chain.

20 KM application software

Dedicated knowledge management software applications are functionally integrated and continuously aligned with the firms formal information system. This system is available and accessible to all members and used with commitment and dedication for the purpose of customer value creation (Examples are data warehousing, data mining tools and decision assistance systems).

Measures

21 Performance indicators

A formal system to measure and manage intellectual capital and other intangible assets are maintained. The measures are used to assess the contribution that intellectual capital/intangible assets make towards the firm's performance.

22 Usage of KM tools

Usage of knowledge management applications and tools is regularly monitored and assessed.

23 KM progress reports

A system of monitoring, reporting and continual assessment of knowledge management programs and practices is maintained.

24 Alignment

Top management fully understands/realises the importance of continually aligning the knowledge management practices with the firms vision, strategy and objectives as well as culture, structure, processes, and technology.

APPENDIX B: Interview Questions

Name: Mr. Harvey Phalatse

Date: 13 October 2017

Place: Johannesburg, Metro Centre, 16th Floor.

Position: Knowledge Management Director

Business Name: City of Johannesburg

The researcher (who is also the City of Johannesburg employee) recently conducted an academic survey amongst the City of Johannesburg senior managers – directors to be specific. The study was about the Knowledge Management Practices in the Local government in South Africa. The City of Johannesburg was used as a case study.

The researcher tried to have a representative sample. We have had four rounds of invitation emails (during the month of August 2017) sent to the respondents. However, the response was low. Out of 234 respondents, only 59 responded. To supplement the survey, this follow up interview with a content expert, namely the director of the KM department at the City of Johannesburg, is necessary.

Interview Questions

1. In your expert opinion, and as a senior manager of the KM department: What could be the contributory factor/s to the survey's low response?
2. The city of Joburg is a big and bureaucratic business. Does business structure assistance KM?
3. The survey findings suggest that city managers, who are expected to have a full grasp of KM, are a bit indifferent to the KM. Do the city managers really understand the KM, its role and benefits to the firm?

- 3 18.8% of the survey respondents said there is no knowledge vision in the city of Joburg. Yet the City of Johannesburg has a knowledge vision. In your view, why did the respondents respond like that?
- 4 32.7% of survey respondents said communication regarding KM is not taking place at all. What is your response to the above?
- 5 Business documents show that KM is being practiced in the city of Johannesburg. But does KM enjoy the assistance of senior managers?
- 6 How widespread are the KM practices in the city of Joburg? Do all departments in the city practice KM?
- 7 A local government municipality is a highly politicised surrounding. Does that affect the KM programme in any way in the city of Johannesburg?
- 8 In 2016, there was a change in political management in the city of Johannesburg. Has the change affected the KM programme?
- 9 A follow up to the above question: does the new political management fully assistance the KM programme in the firm?
- 10 The City of Johannesburg, which is also regarded as a Smart City, has been practicing KM for more than ten years now. Is the firm reaping the benefits of KM? If so, how so? Elaborate.
- 11 Technology plays a key role in facilitating KM. Are there technical resources to facilitate KM?
- 12 Is there a Chief Knowledge Officer in the City of Johannesburg?
- 13 The city of Johannesburg services the residents of Johannesburg. How has KM improved productivity and customer service in the city of Johannesburg?
- 14 Does the KM department have enough capacity (budget, staff complement and resources) to carry out its mandate? How big/small is the department?

- 15 Knowledge retention poses a challenge for many firms. What strategy does the city of Johannesburg use to retain knowledge?
- 16 There are KM challenges you probably are facing. What are those challenges confronting you as a firm?
- 17 What are the possible solutions to the KM challenges facing the firm? And the way forward?